Portland Enhanced Transit Corridors Plan & Regional ETC Pilot Program

April Bertelsen, PBOT

Planning and Sustainability Commission

April 10, 2018

WE KEEP PORTLAND *MOVING.*

PBOT
PORTLAND BUREAU OF TRANSPORTATION

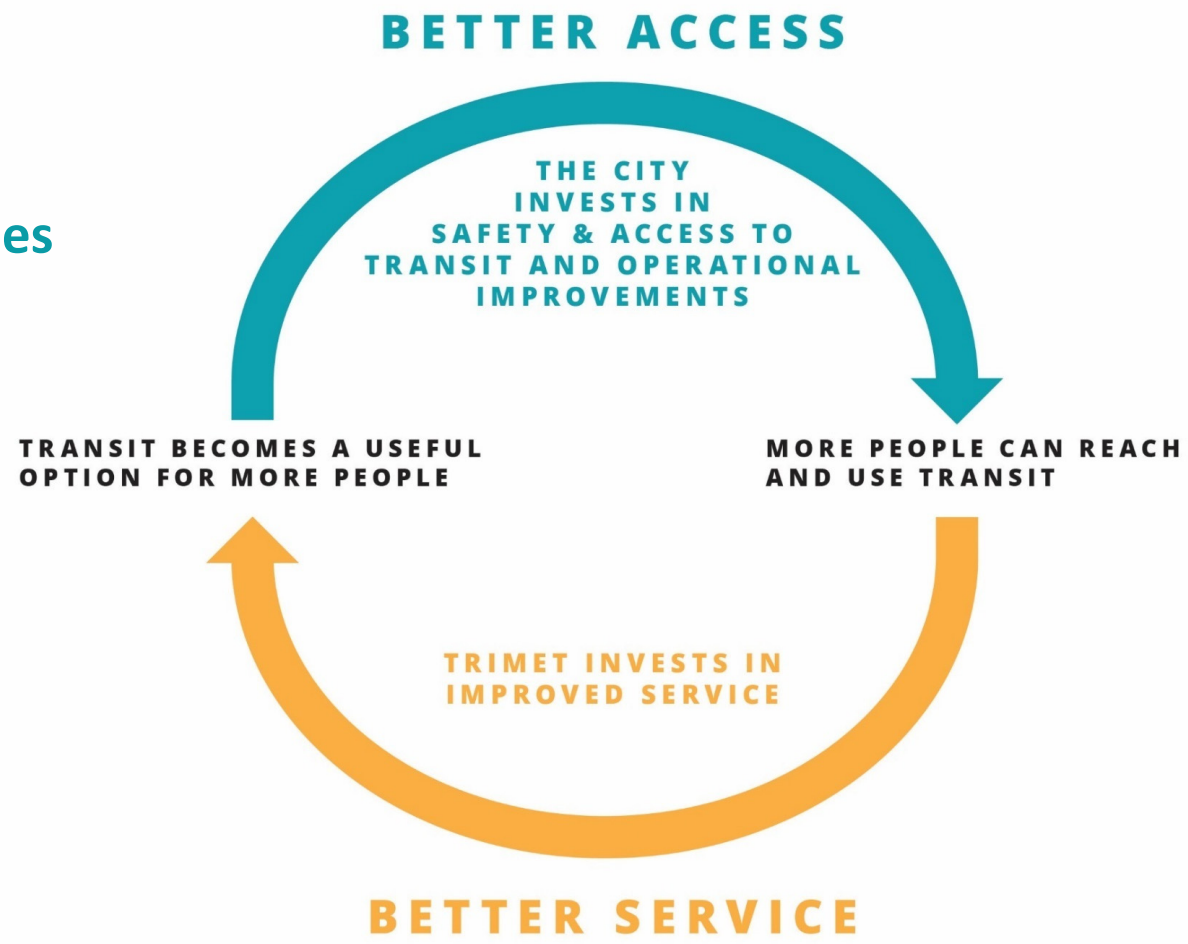
Today's PSC Briefing

- **Present Summary of the Draft Enhanced Transit Corridors Plan**
  - Highlight recommended future amendments to the TSP including policy and projects
- **Introduce the Regional ETC Pilot Program**
  - Highlight the list of candidate segments under consideration for advancing to project development
- **Seek PSC feedback and recommendations**
- **Seek PSC letter of support**

Growing Transit Communities

Enhanced Transit Corridors

THE VIRTUOUS UPWARD SPIRAL OF TRANSIT INVESTMENT



Portland's ETC Plan Purpose

- Help identify where transit priority, streamlining, and access treatments could be most beneficial on the planned TriMet Frequent Service network within the City of Portland to improve transit reliability, travel time and capacity.
- Such improvements can help make transit a more attractive and reliable option for people to get to work, school, and to meet their daily needs, especially for people who depend upon transit.

Portland's ETC Plan Goals and Outcomes

- Increase transit ridership and improve experience of current riders
  - More dependable transit trips so people arrive on time.
  - Faster transit trips
  - Buses arriving at stops more on-time
  - Passengers not passed by late, over-crowded buses
- Support equity goals
  - Dependable transit is especially important for shift workers with strict start time policies.
  - Faster transit helps people with longer trips, who may live further from work.
- Support planned growth consistent with the 2035 Portland Comprehensive Plan

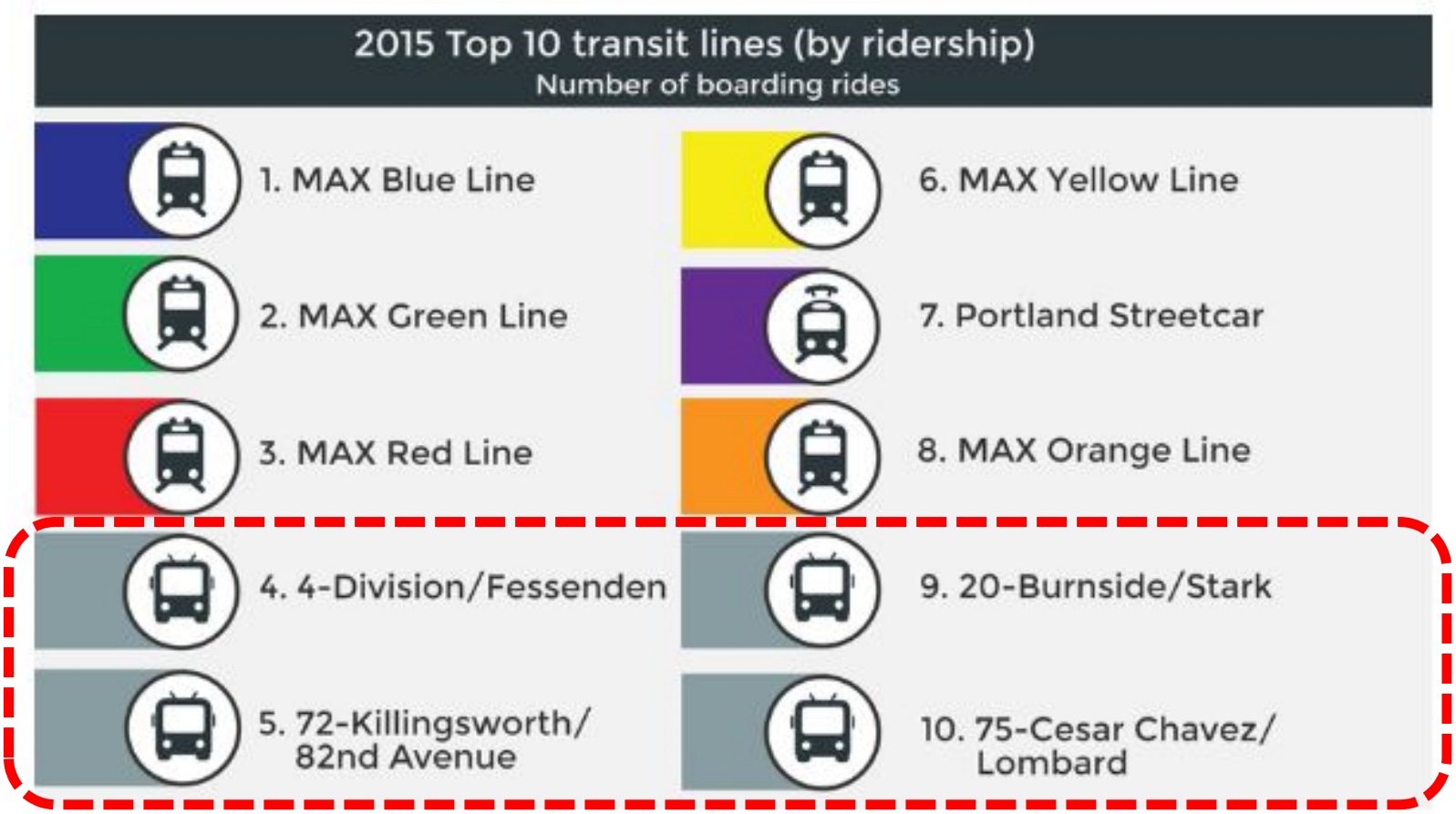
Proposed Shift to Better Support Transit

- Define “Enhanced Transit” and a toolbox.
- Identify where it is most needed.
- Establish an on-going program to define what success looks like.
- Guide prioritization of investments.
- Forge deeper partnerships and coordination with TriMet.
- Help make all transit riders count!

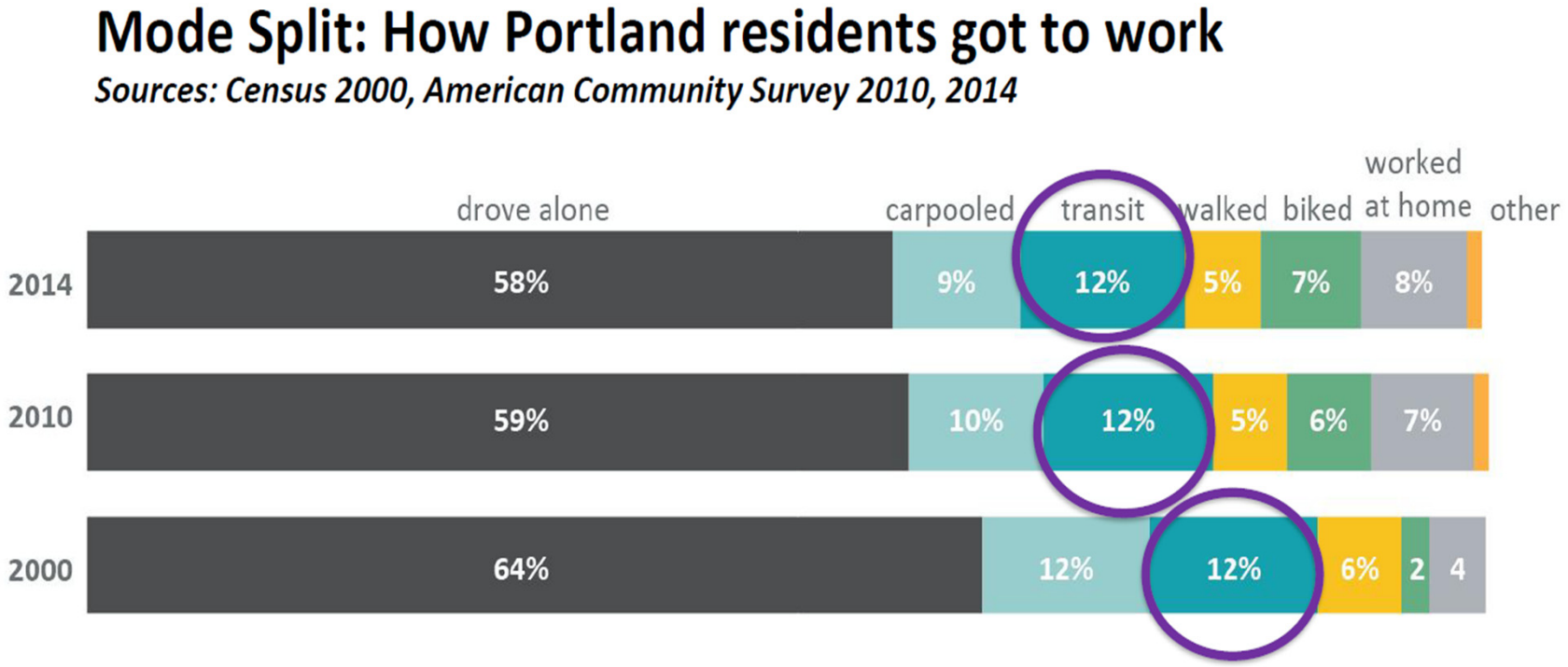
Why this plan?

Answer: We need to do more to support transit in Portland

Buses are a “work horse” and carry significant ridership regionally, up there with MAX

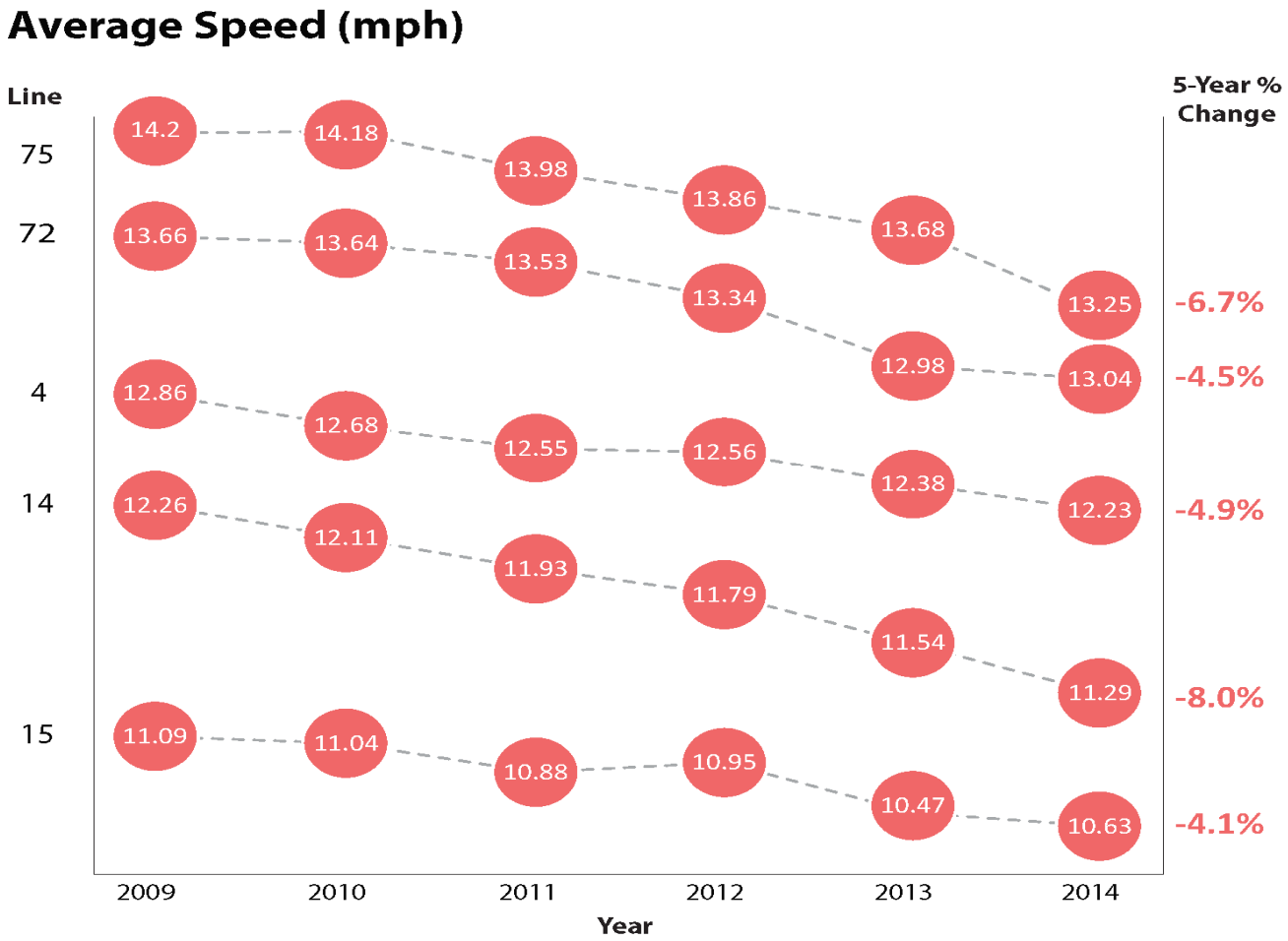


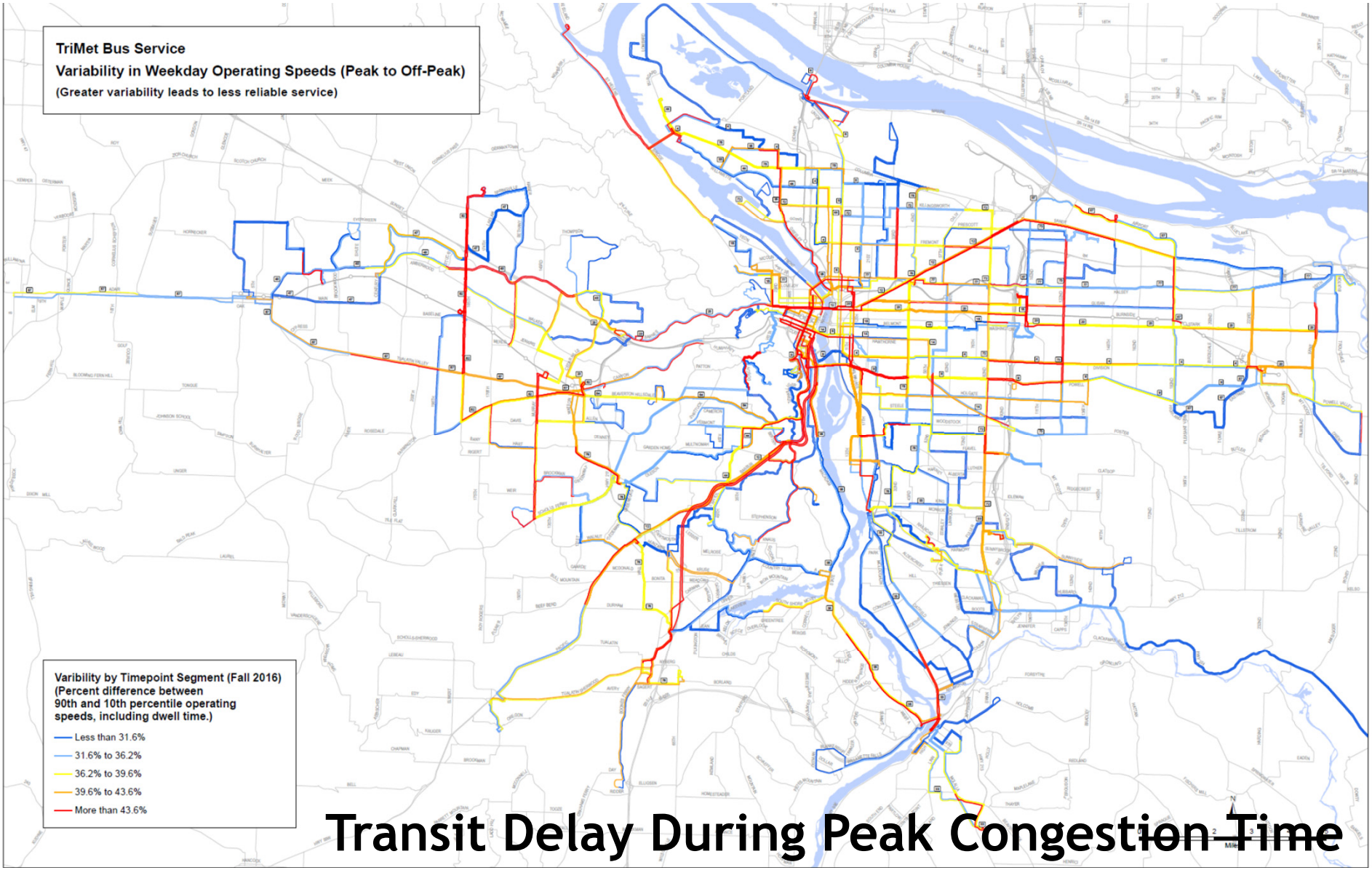
Transit ridership is not growing adequately to support growth



City-adopted goal is that 25% or more of Portlanders commute by transit by 2035

Buses are getting stuck in traffic and trips take longer





Transit Delay During Peak Congestion Time

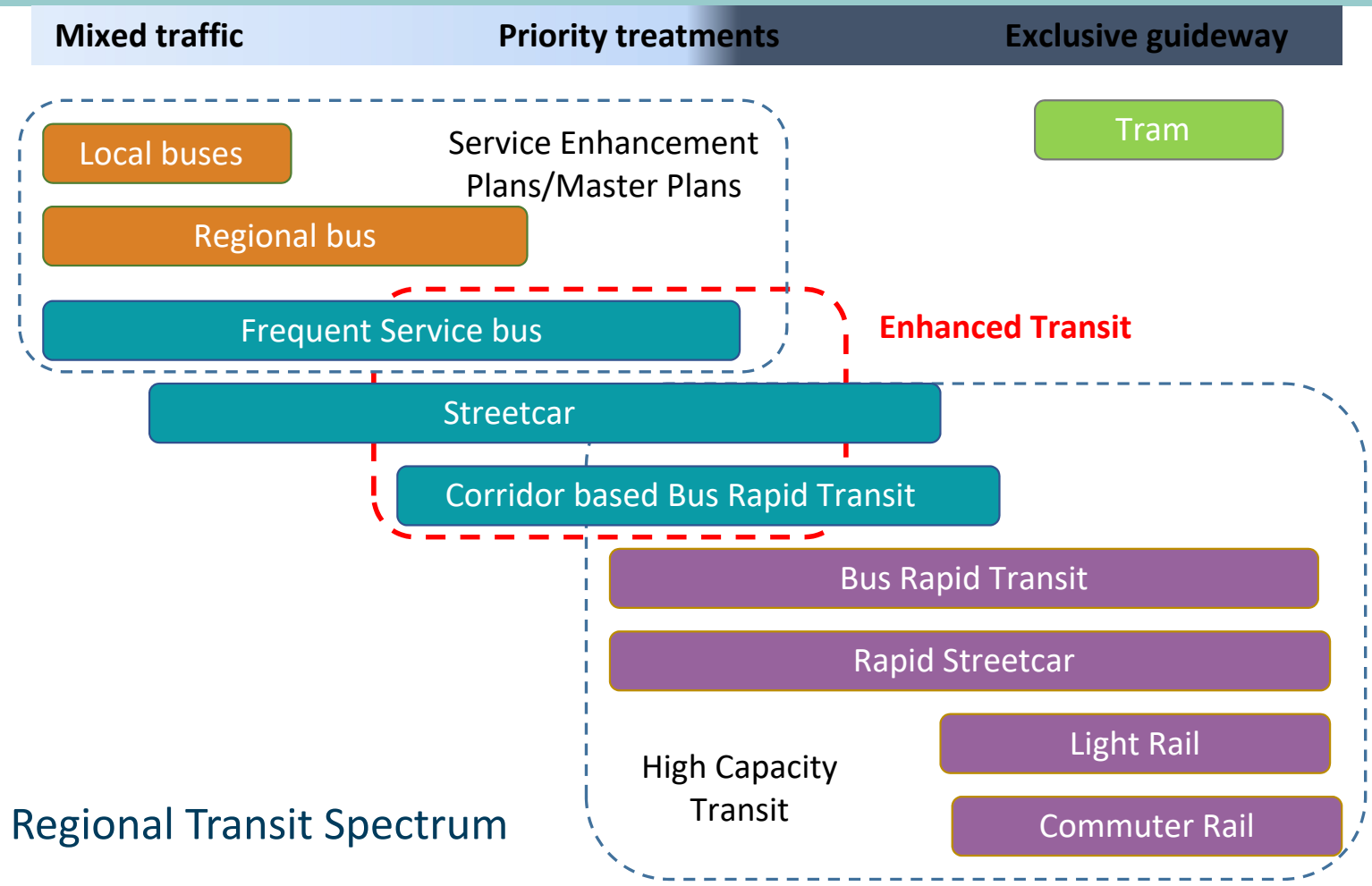
Why this plan?

More Reasons:

- New growth is happening in areas in need of better transit service and access.
- Major transit capital projects take time to build.
- Limited sources of revenue. We need to identify priorities.

What is Enhanced Transit?

REGIONAL TRANSIT SPECTRUM



Regional Transit Spectrum

Characteristics of Enhanced Transit

- Increased capacity, reliability and transit travel speed
- Moderate capital and operational investments
- Flexible and context sensitive
- Can be deployed relatively quickly
- Can include bus or streetcar
- Could be a hot spot, corridor or full line

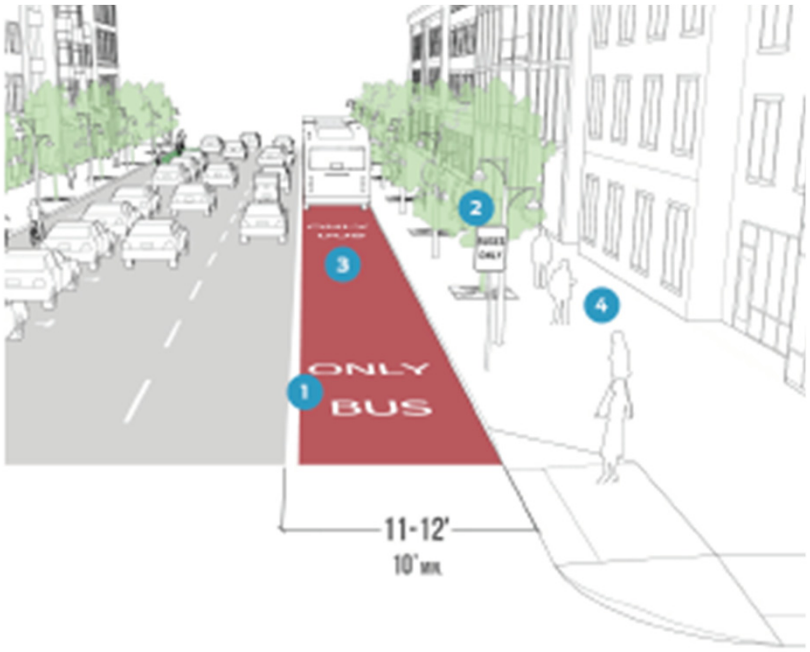
The Vine recently opened in Vancouver, WA

Enhanced Transit Toolbox

Contents

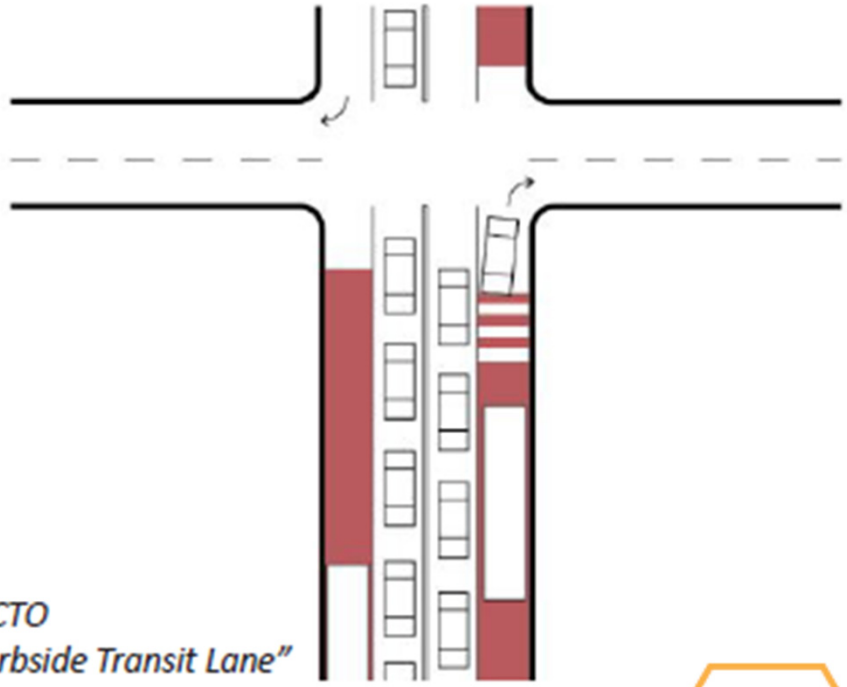
Laneways and Intersection Treatments

Dedicated Bus Lane



NACTO "Curbside Transit Lane"

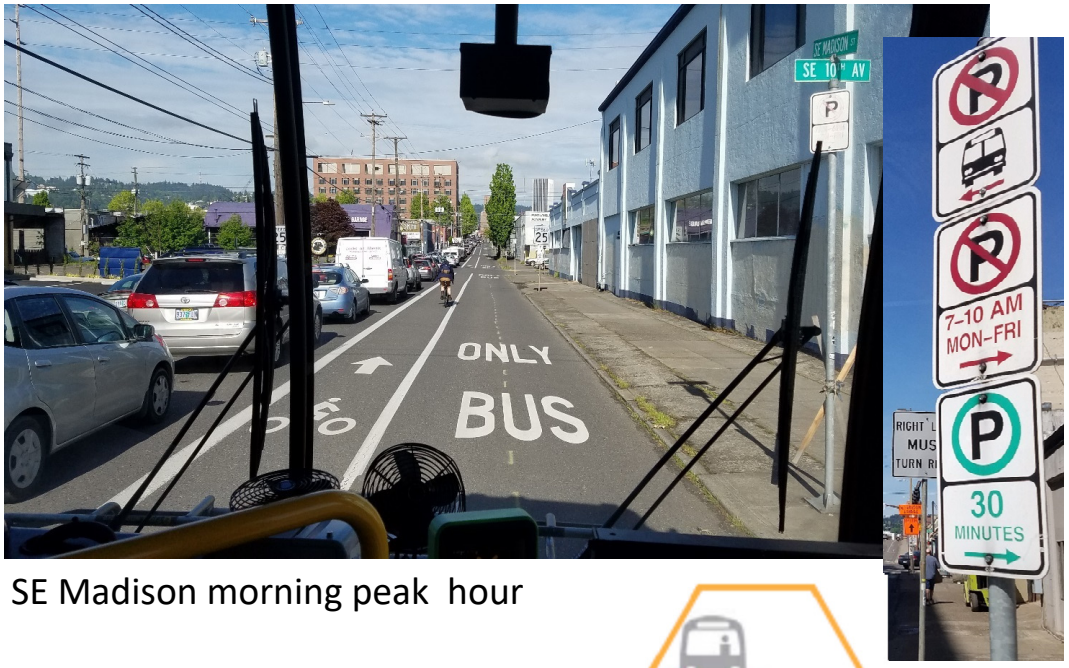
Business Access and Transit (BAT) Lane



NACTO
"Curbside Transit Lane"

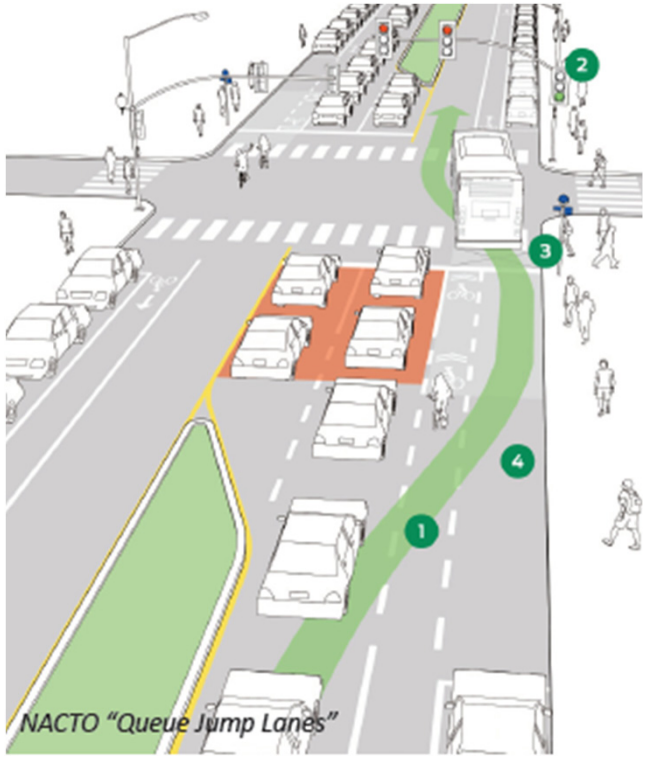
Laneways and Intersection Treatments

Pro-Time (Peak Period Only) Transit Lane



SE Madison morning peak hour

Intersection Queue Jump/Right Turn Except Bus Lane



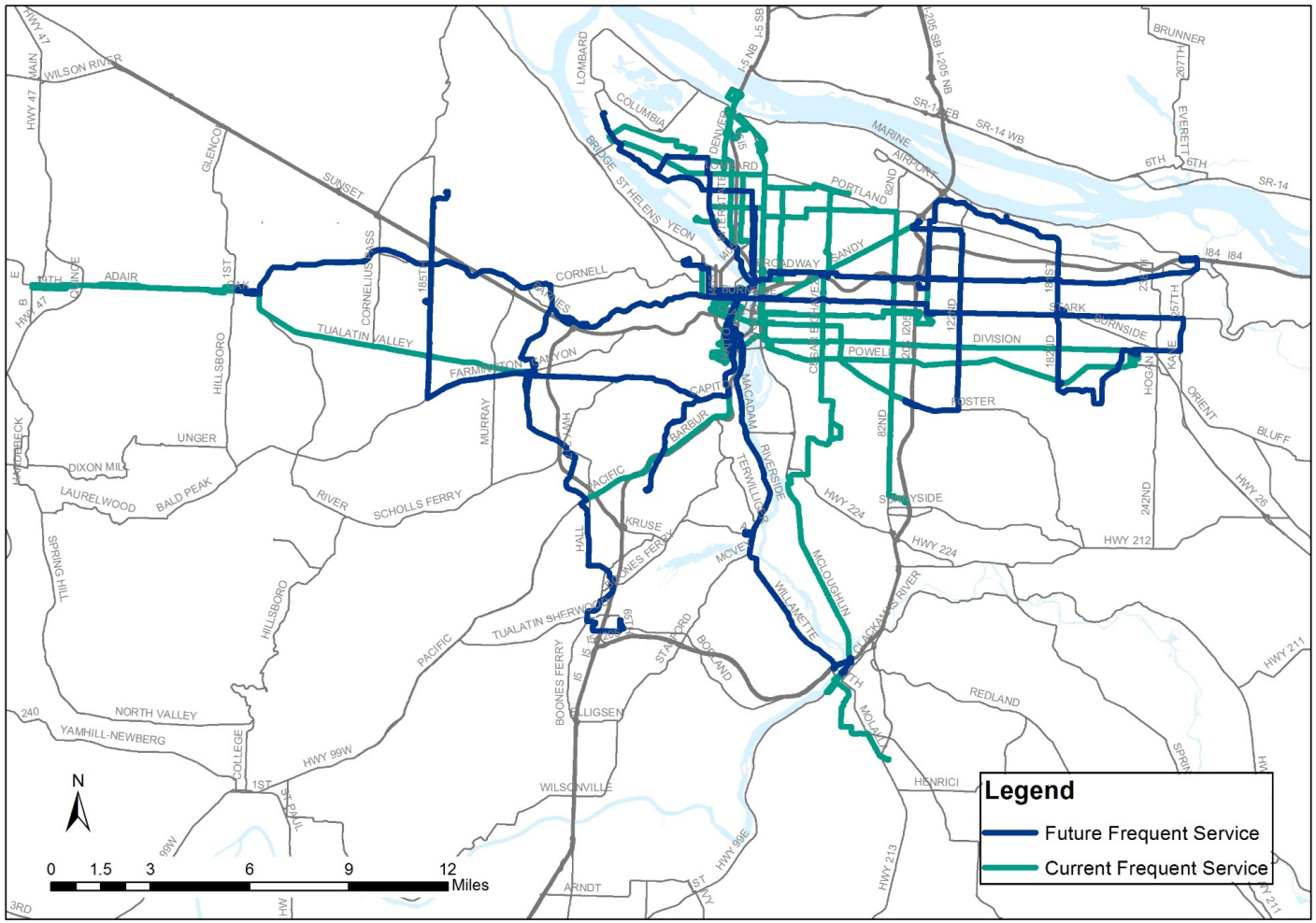
Key ETC Plan Elements

Three-Prong Implementation Strategy

1. Adopt policies supporting transit
   - Make transit the preferred mode for trips over 3 miles citywide
   - Make space and time in the right-of-way for ETC treatments
2. Strengthen Ongoing Monitoring of Frequent Lines
3. Development of a 20-year Regional Transit Vision with strong ETC component and nimble implementation
   - Recommend amending and adding several projects to the TSP
   - Accelerate implementation of ETC treatments along both short segments and longer corridors
   - Identify new funding sources and tie funding to increases in transit service

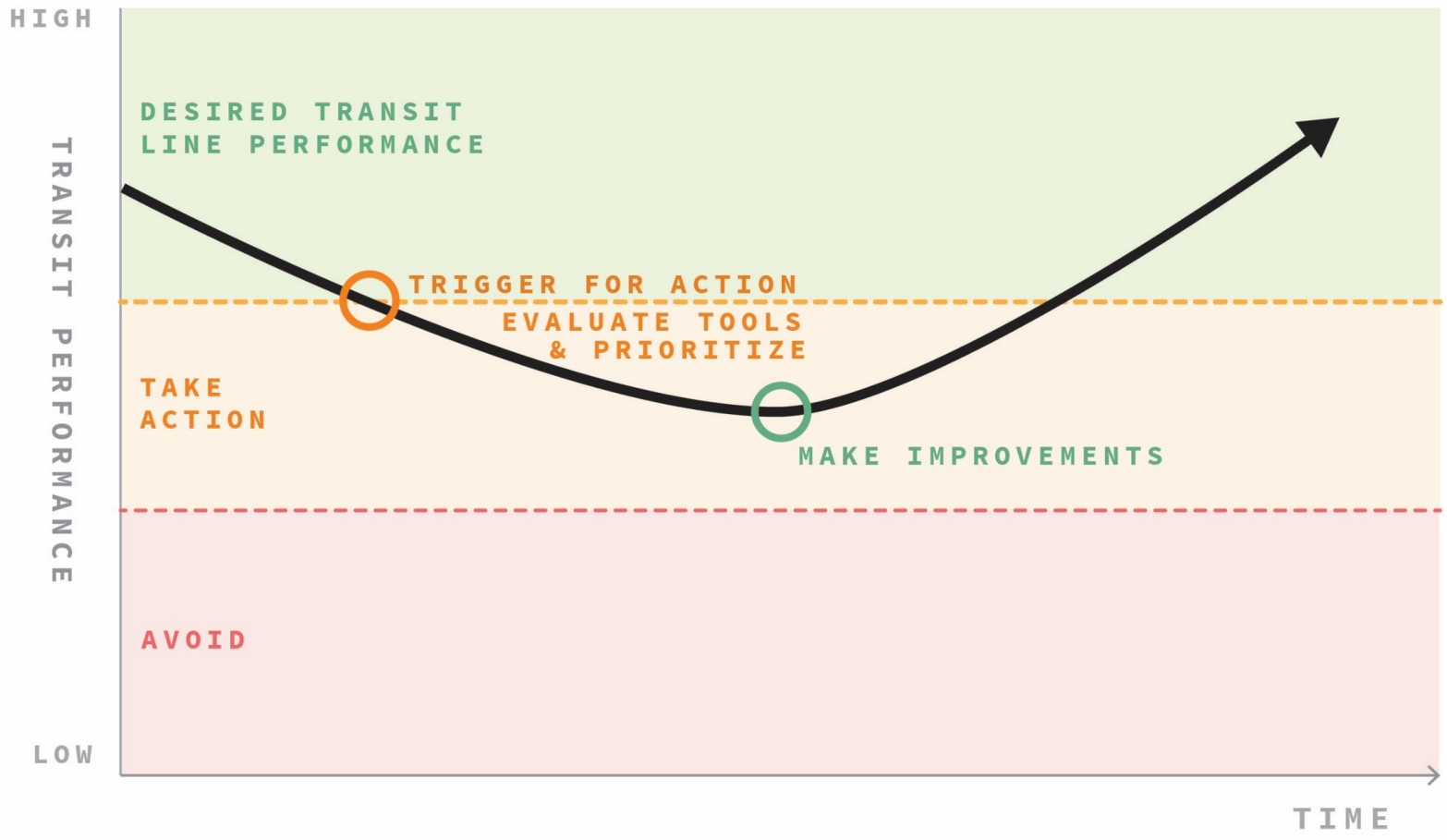
On-going Monitoring of Transit Performance

- Monitor TriMet Frequent Service bus and streetcar lines, both current and planned routes.
- City of Portland actively manages the ROW to support ETC improvements
- City and TriMet execute improvements in service and reliability



Monitoring transit performance and making improvements

An example of the **monitor→take action** cycle for an individual transit line



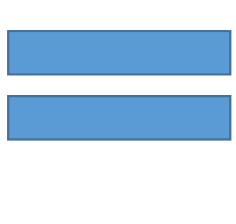
Trigger to Talk:
Help Make All Transit Riders Count!

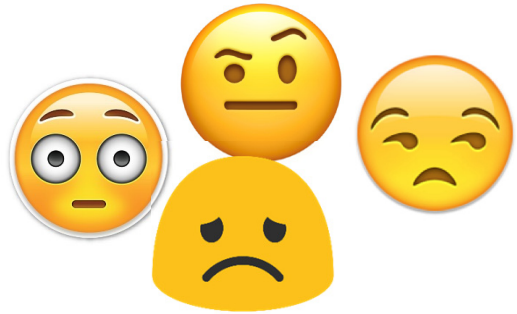
Measure Passenger Delay:

How much each bus/streetcar is slowed down during peak travel time (Transit Delay) multiplied by # of passengers per bus. Measured for each time point segment along a route.

Amount of time a bus is delayed in traffic

How many people are on the bus





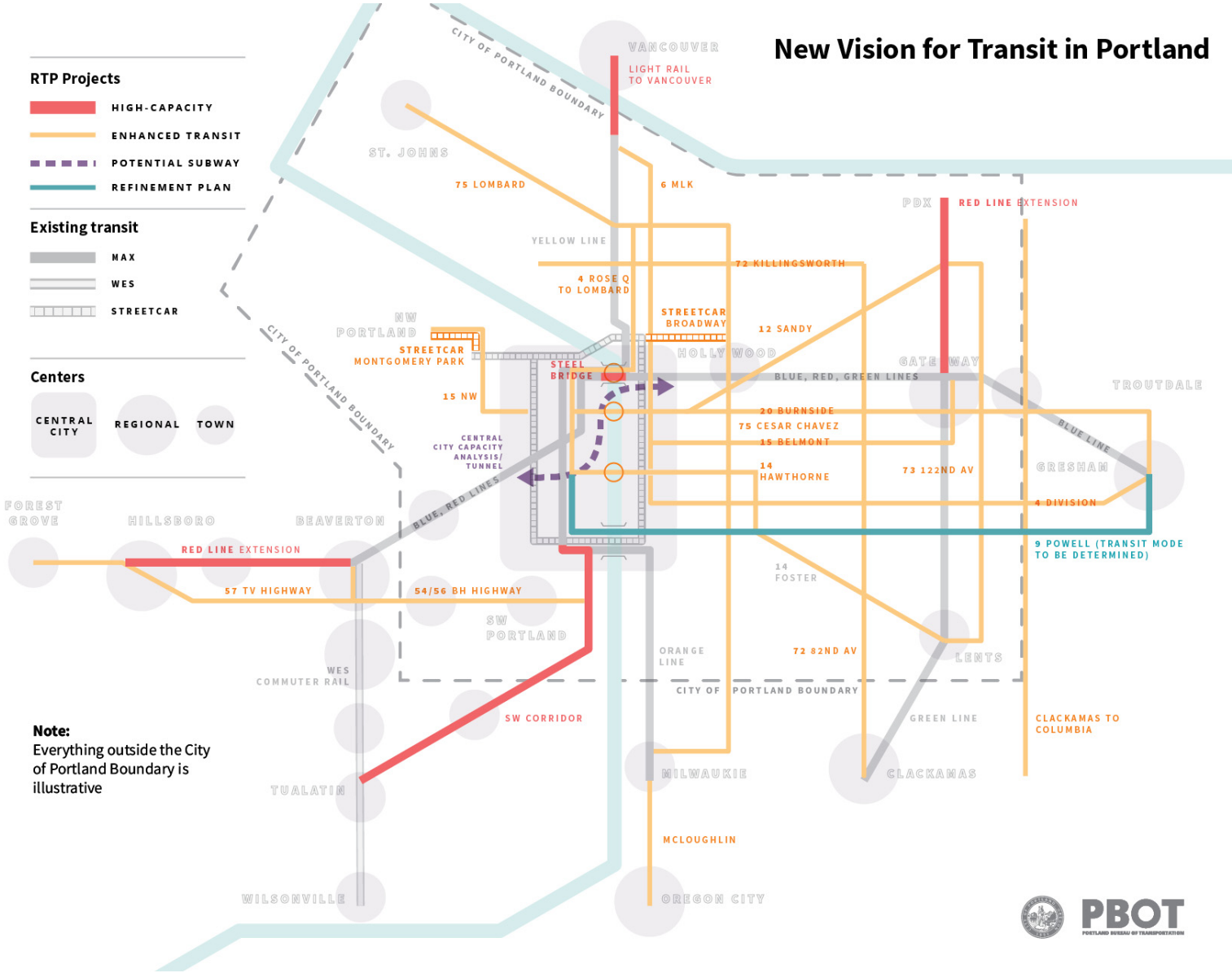
# of minutes in Passenger Delay

Triggers to Talk:
Make transit more efficient and reliable

Transit Run Time Variability:

- Measures the day-to-day variability of each bus trip end-to-end.
- Identifies deficiencies in reliability and need to add additional resources (operators/vehicles) to maintain schedule and be dependable.
- Measure at the route level.

- **Add Enhanced Transit**
  - **Streetcar**
  - **Buses**
- **Extend MAX lines**
- **Address transit bottlenecks**
- **Powell Corridor Refinement Plan (mode TBD)**

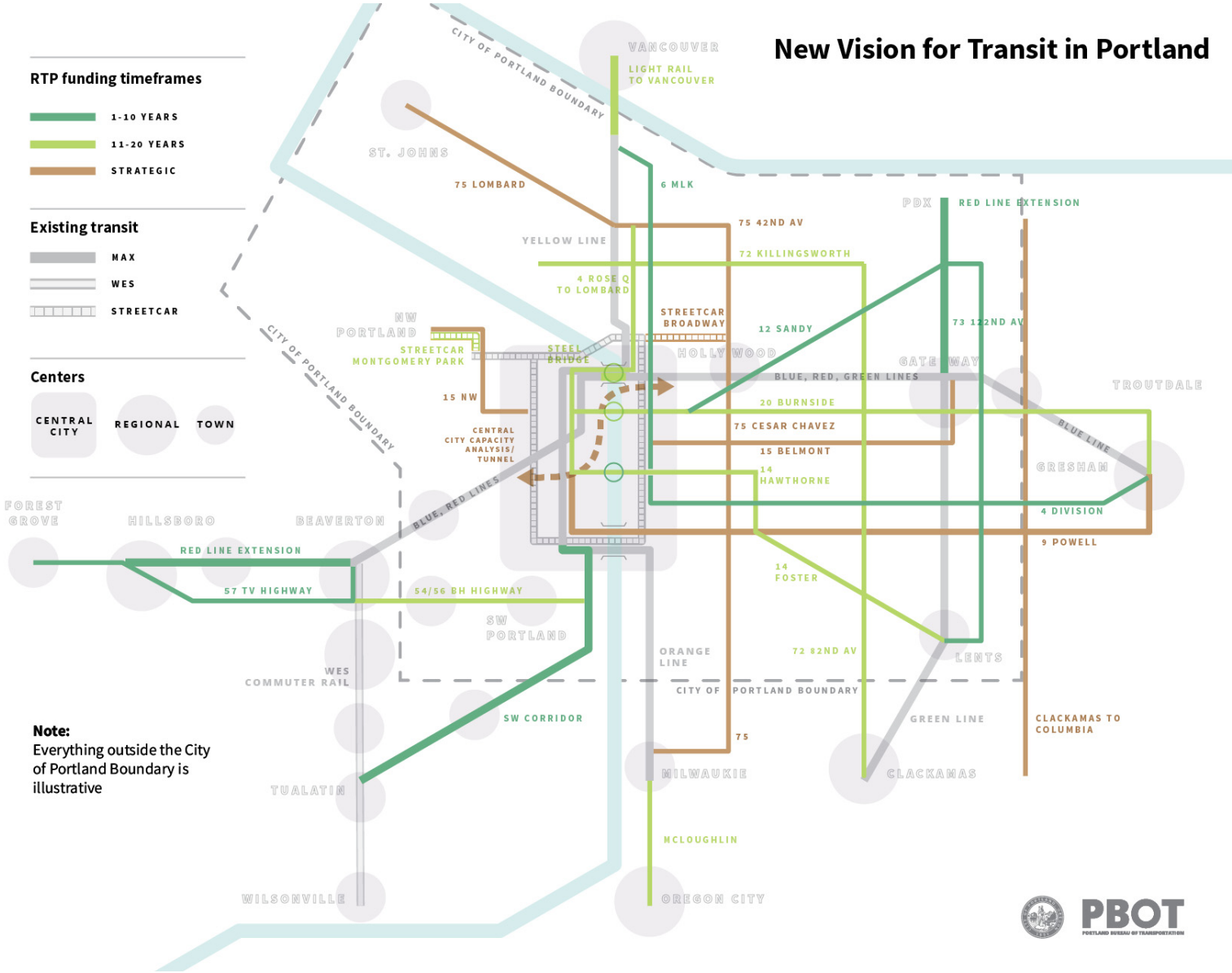


RTP Project List Timeframes:

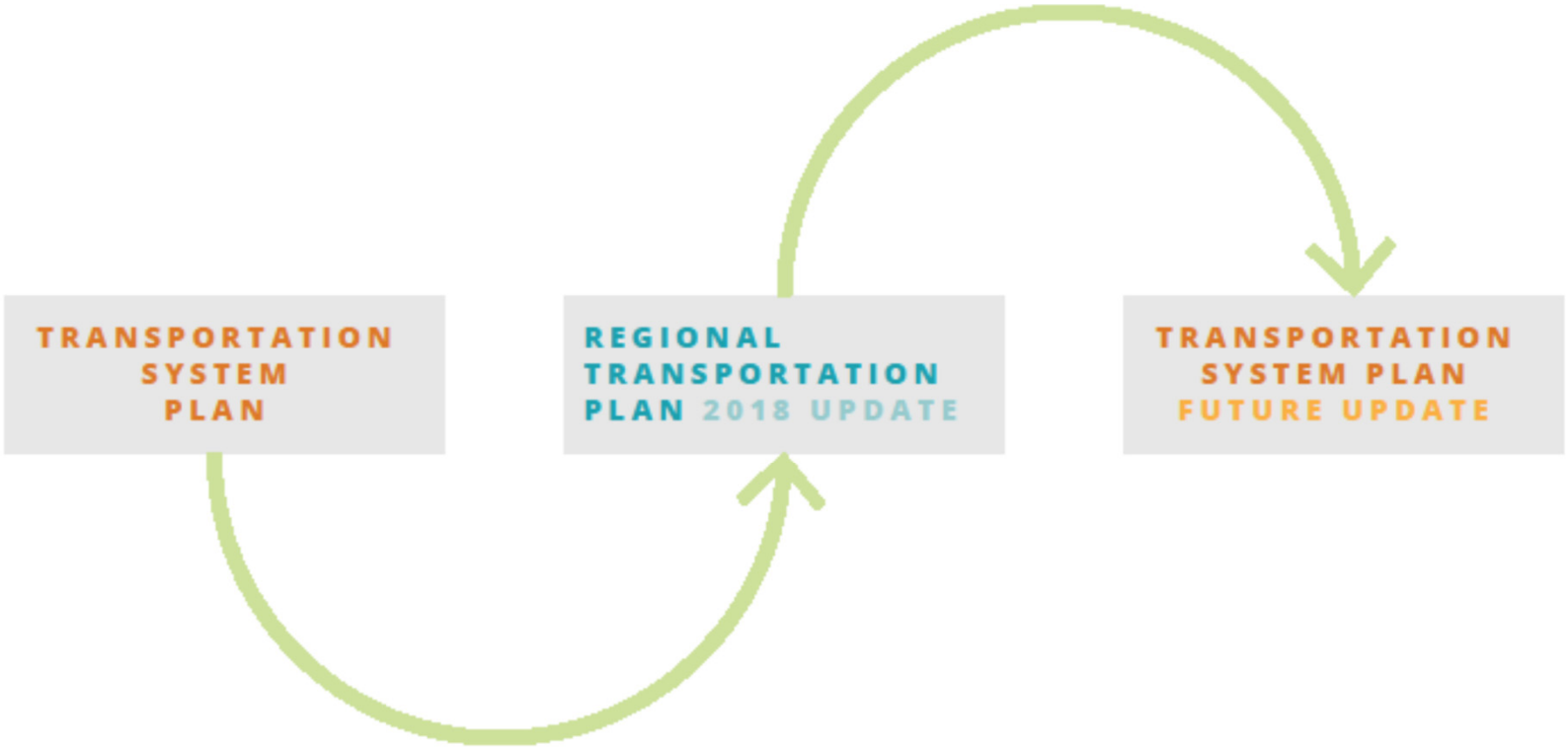
1-10 Year Constrained

11-20 Year Constrained

Strategic



THE SYMBIOTIC RELATIONSHIP BETWEEN THE TSP AND RTP

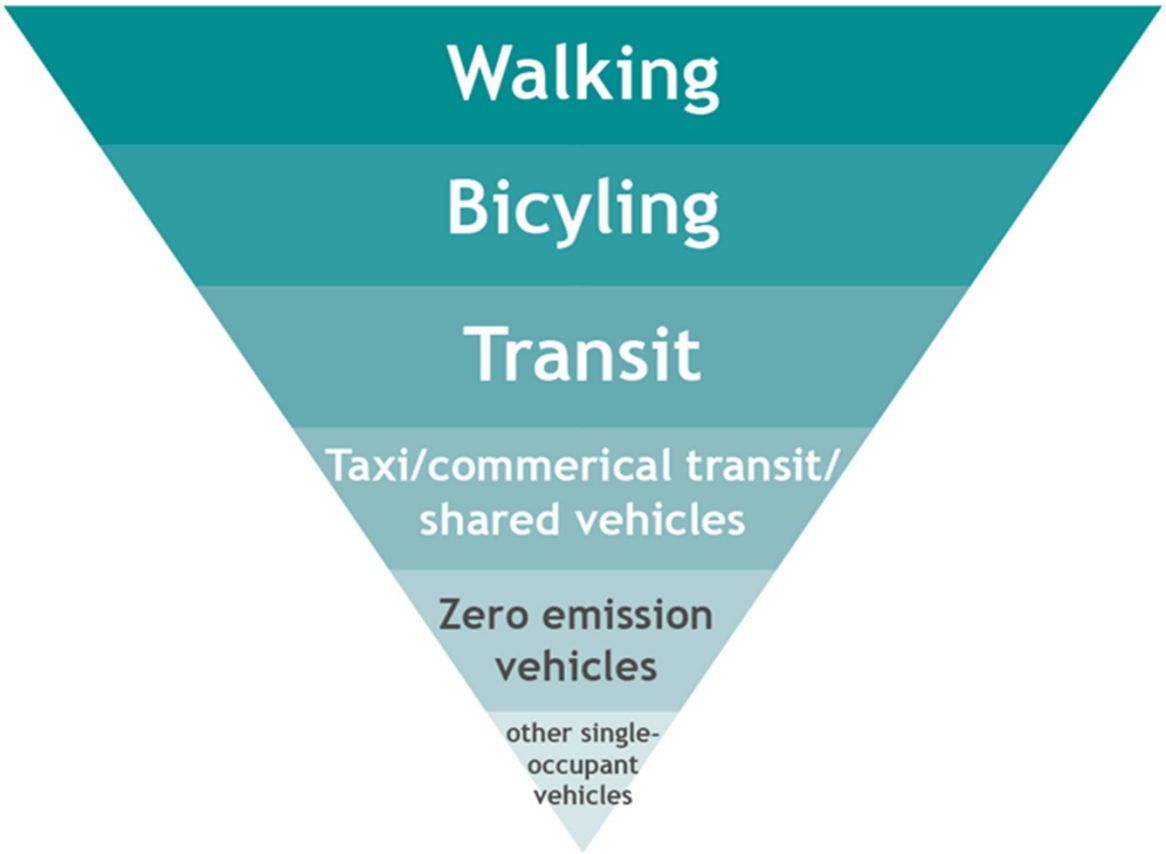


During Implementation:
Making design decisions in constrained locations

- Guided by policy
- Informed by data
- Sensitive to context
- Consider re-allocating space and time

Measuring ‘Passenger Delay’ can help weigh benefits and impacts.

TSP Policy 9.6 –
Regarding the transportation strategy for people movement



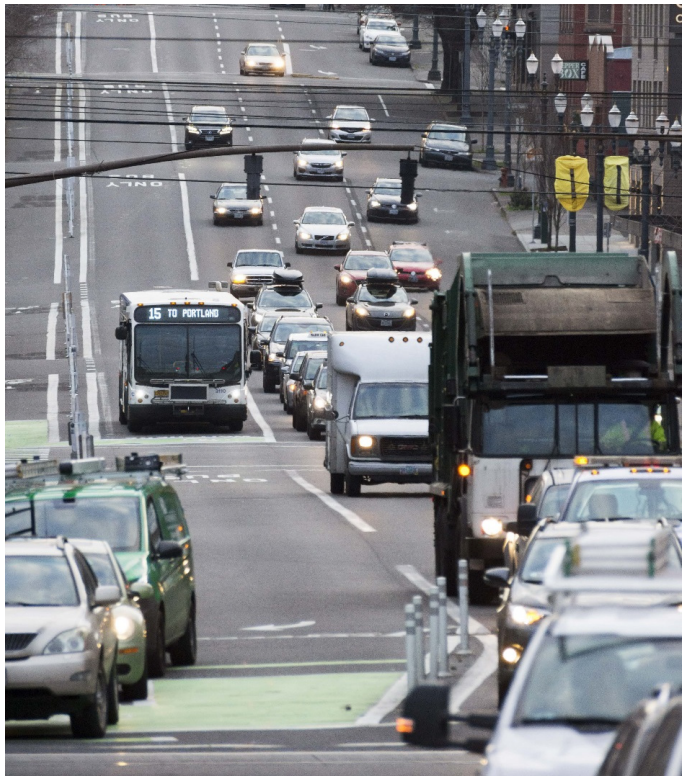
Early Implementation

Transit Priority
Spot Improvements Program

Installed in 2017

- **Line 12: NE Sandy Blvd approaching 72nd**
- **Line 14: SE 50th approaching Powell**

SE Morrison Protected Bike and Pro-time Bus Lane/BAT Lane: SE 11th – SE Grand



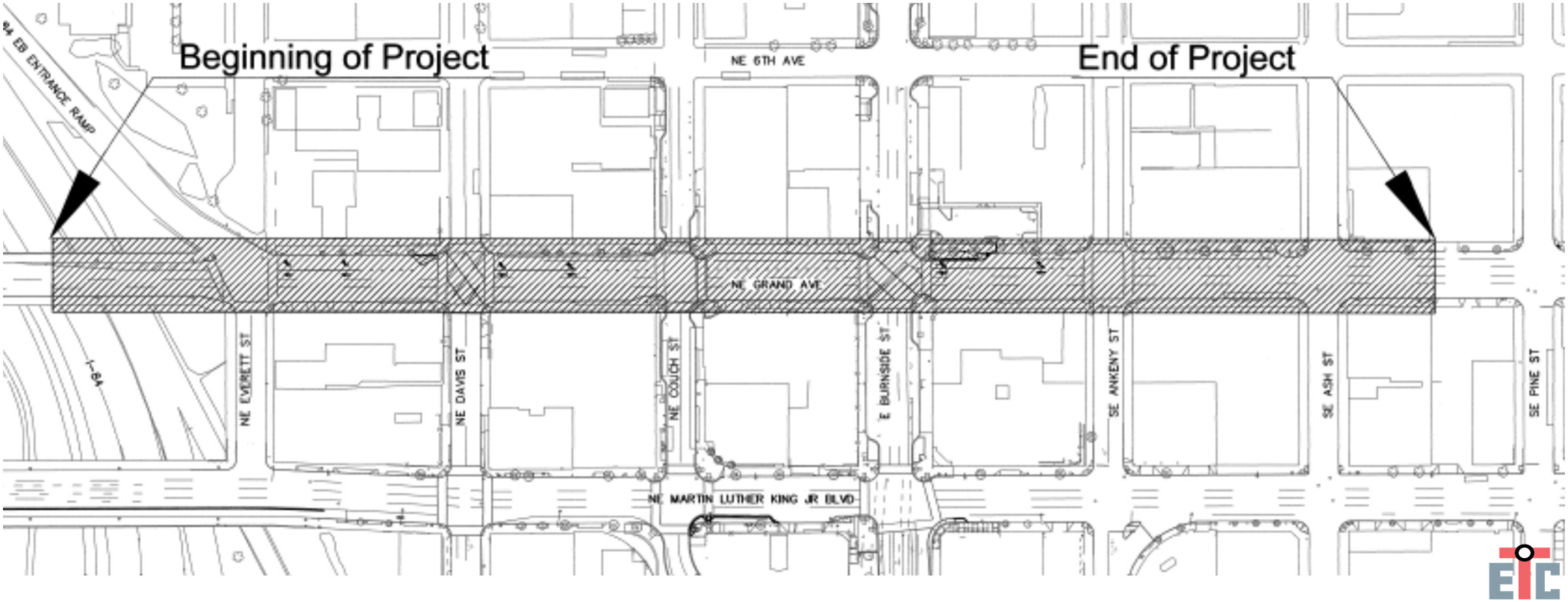
Upgraded in 2017

W Burnside BAT Lane/Queue Jump: 4th Ave - Bridge

Installed in 2017

Capital Project Coming in Spring 2018

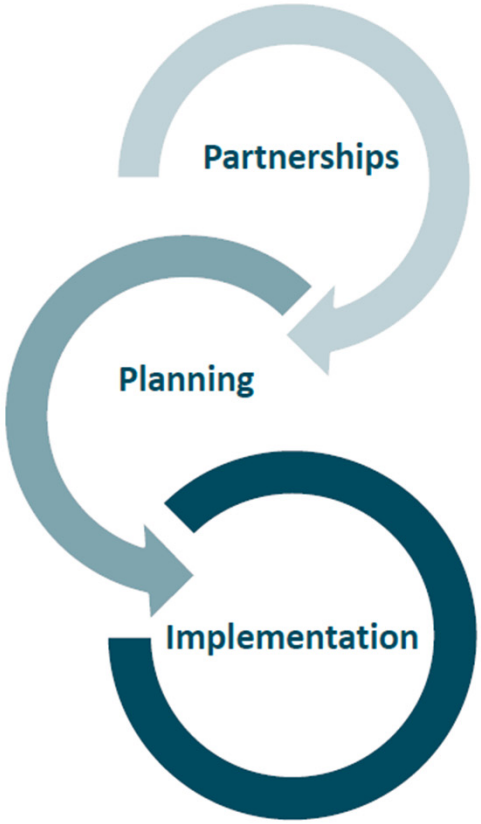
NE Grand Business Access and Transit (BAT) Lane: SE Ankeny – NE Everett / I-84



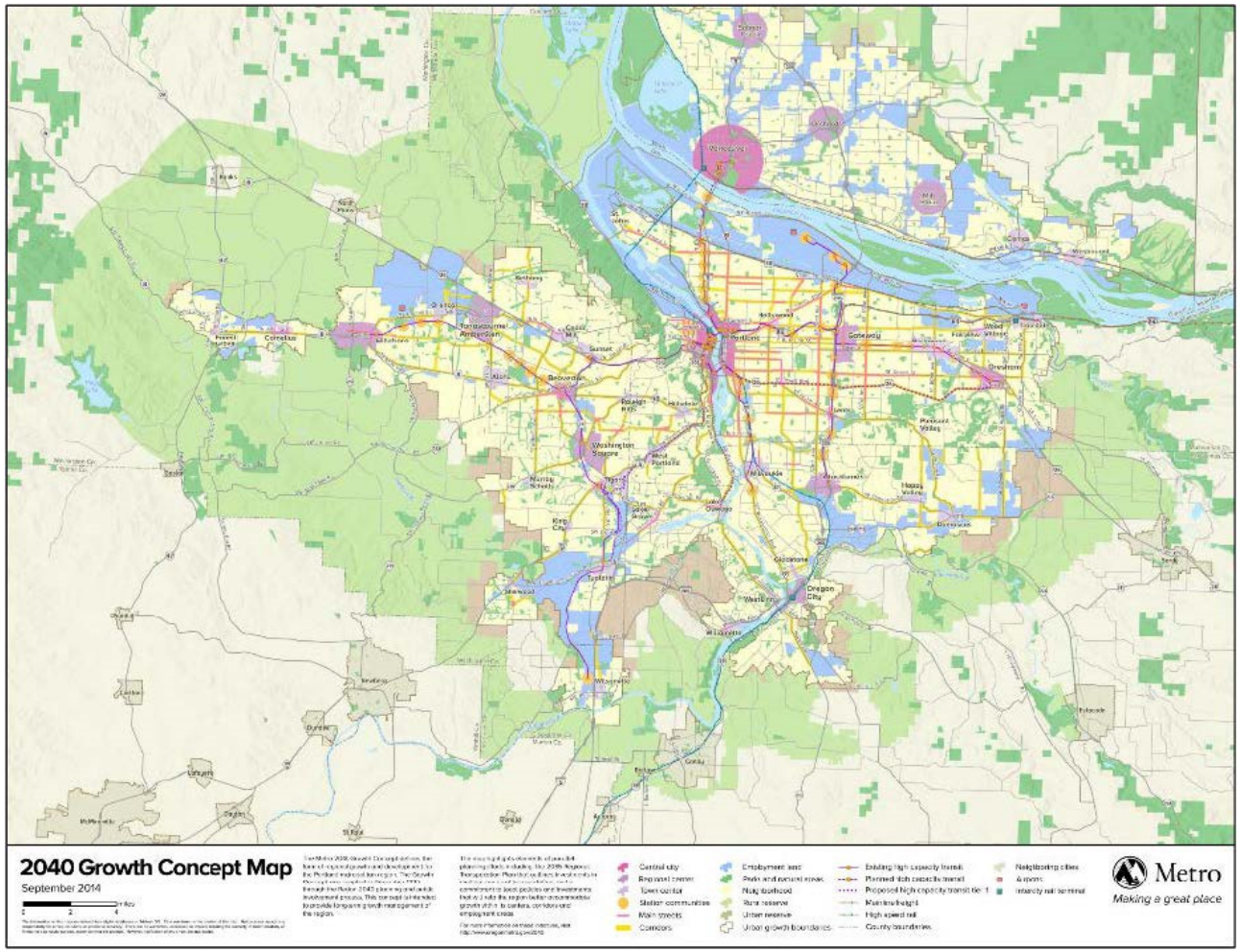
Regional ETC Pilot Program

Regional Transit Vision

To make transit more frequent, convenient, accessible and affordable for everyone



Regional Enhanced Transit Opportunities



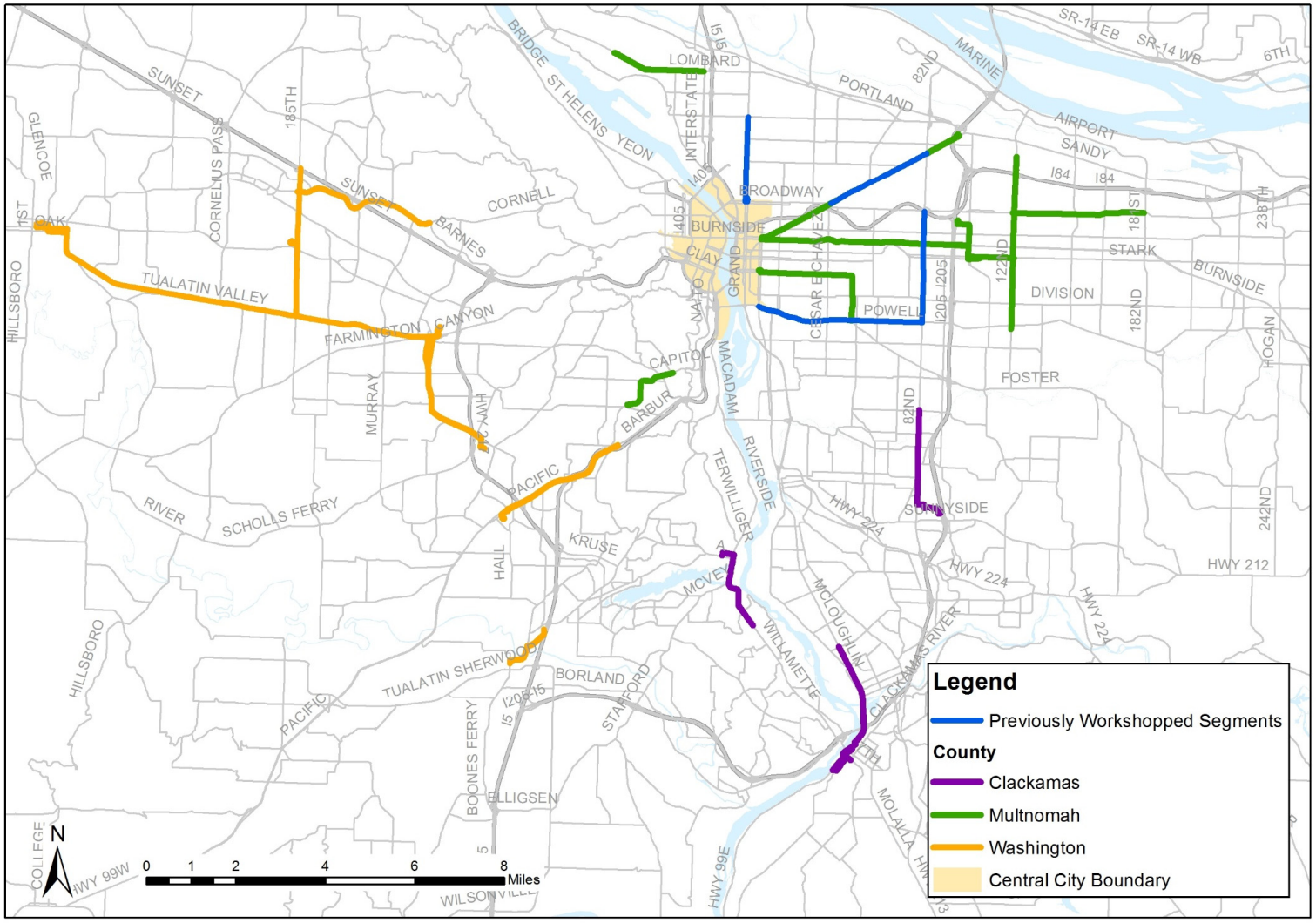
Climate Smart Strategy
for the Portland metropolitan region
oregonmetro.gov/climatestrategy
2014

The Future of TRANSIT

Regional Enhanced Transit Concept Pilot Project

- Improve transit reliability, speed, and capacity
- Identify, design and build a set of Enhanced Transit projects
- Develop a pipeline of Enhanced Transit projects

Regional ETC Pilot Program Candidate Segments (outside Portland Central City)



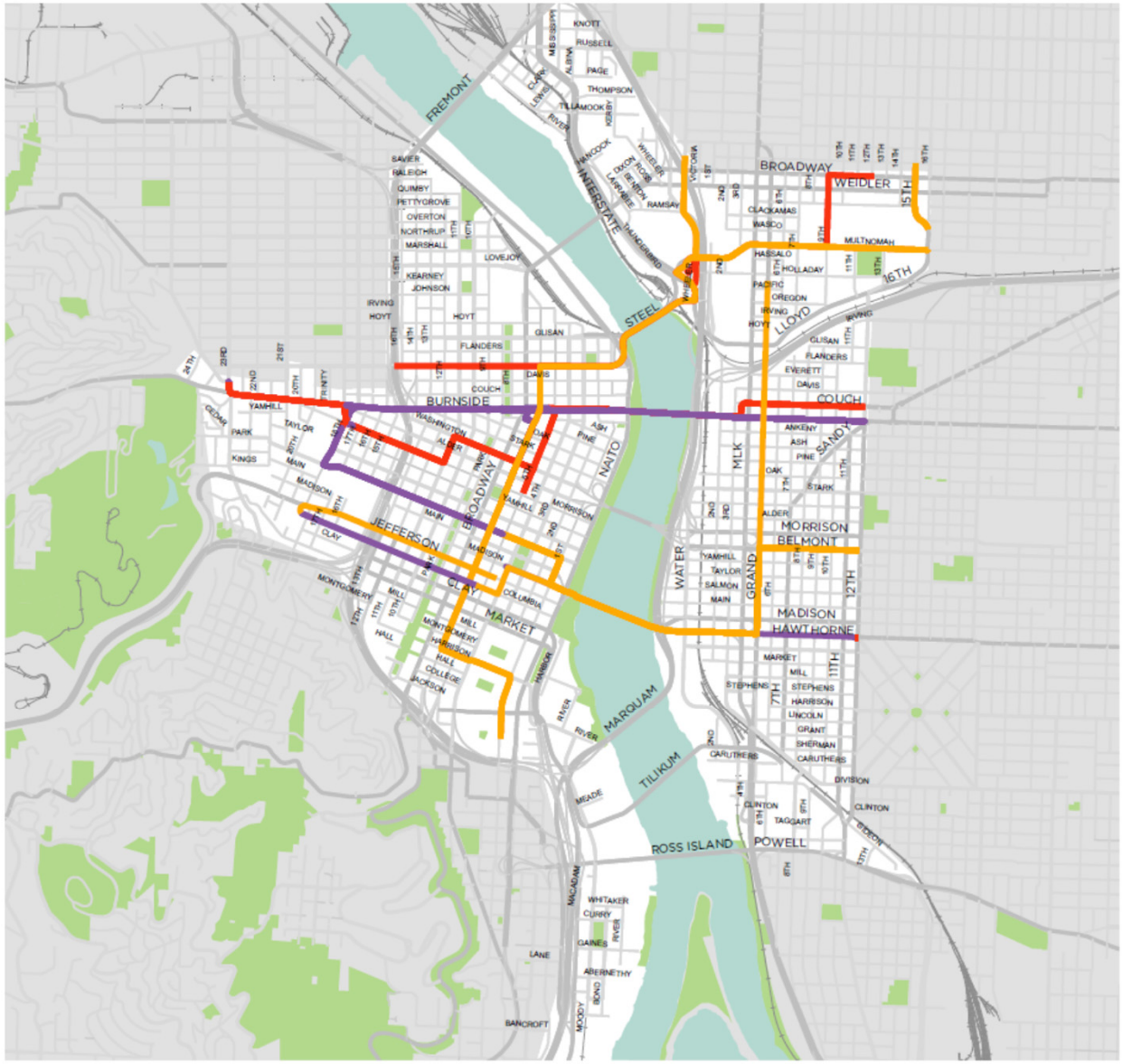
122nd Avenue Plan: Safety, Access and Transit

- Develop a multi-modal conceptual investment plan.
- Identify any cross-section changes.
- Apply the Enhanced Transit Toolbox where feasible.
- Identify a subset of priority project improvements to build with the remaining FOS funds for 122nd Ave and any additional funding secured.
- Identify other recommended improvements for future projects to seek funding.

ENHANCED TRANSIT CORRIDORS

CENTRAL CITY IN MOTION

This map shows the highest priority bus route segments in the Central City. TriMet prioritized segments based on ridership, reliability, and dwell time.



High Priority Bus RouteSegments by Weighted Score

- 19; 20
- 17; 18
- 15; 16

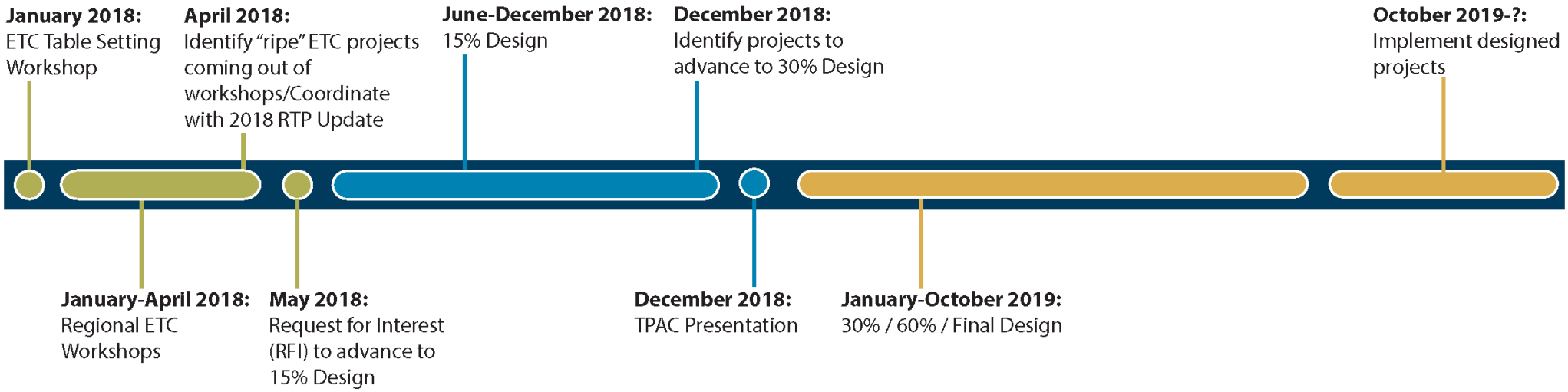
0 1,300 2,600 FEET

N

Data provided by the City of Portland TriMet, and Metro.
Map produced December 2017.

PBOT ch2m alta

Regional Enhanced Transit Concept Pilot Project



Next Steps

Recent Community Stakeholder Engagement

February 19: **Public Open House**

Feb 26 - March 26: **Online Survey**

February - April: **Visit various stakeholder groups and committees**

- OPAL Bus Riders Union
- Portland Bus Lane Project
- Businesses for an Better Portland
- NECN Land Use and Transportation Committee
- East Portland Land Use and Transportation Committee
- Bicycle Advisory Committee
- Pedestrian Advisory Committee
- PBOT Bureau and Budget Advisory Committee
- Portland Business Alliance (April 24)

City ETC Plan Next Steps

Early April:	PBOT staff to revise draft ETC Plan based on public feedback
Mid to Late April:	Release Final Recommended ETC Plan to the public
	Recommend a narrowed list of candidate segments to submit to the Regional ETC pilot program
Mid to Late May:	City Council Public Hearing [Date TBD]
June:	Submit candidate segments to the Regional ETC pilot program
On-going:	Incorporate Enhanced Transit into various projects
	Continue transit priority spot improvement implementation
	Seek additional funding for Enhanced Transit projects
	on-going performance monitoring

PSC Discussion and Input

- **How this fits with and supports Portland's Comprehensive Plan**
- **How this advances PSC direction in the TSP Update to study an inner ring and outer ring transit study**
- **Is there PSC support for the Draft Enhanced Transit Plan?**

Thank you!

PRESERVE what we have built and **OPERATE** it well

Embrace **VISION ZERO**

BUILD A FUTURE where all can grow and thrive

Effectively **MANAGE CITY ASSETS**

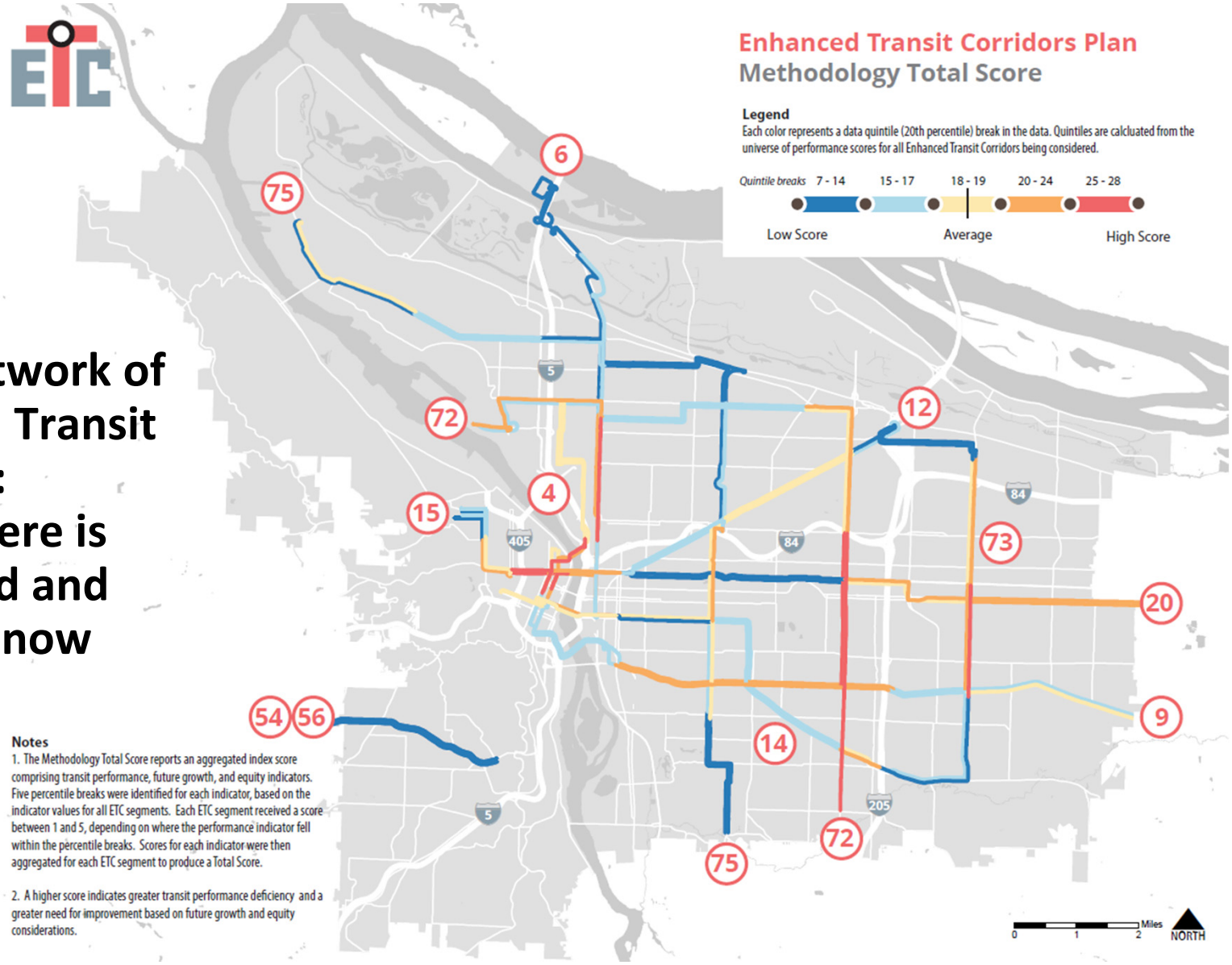
Contribute to the **HEALTH AND VITALITY** of our people and our planet

Learn more.

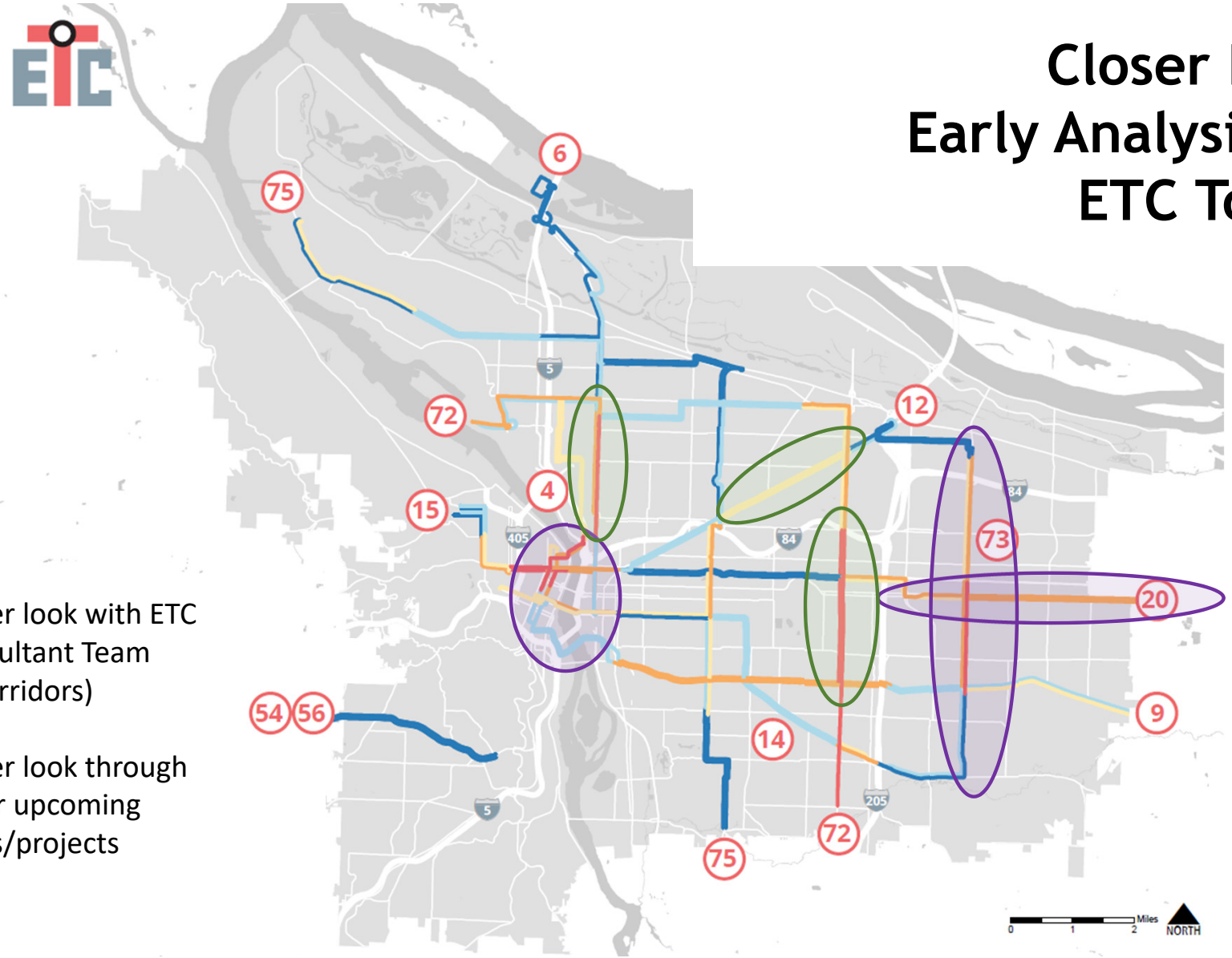
www.portlandoregon.gov/transportation/ETCplan

Additional slides to have on hand

Initial Network of Enhanced Transit Corridors: Where there is most need and potential now



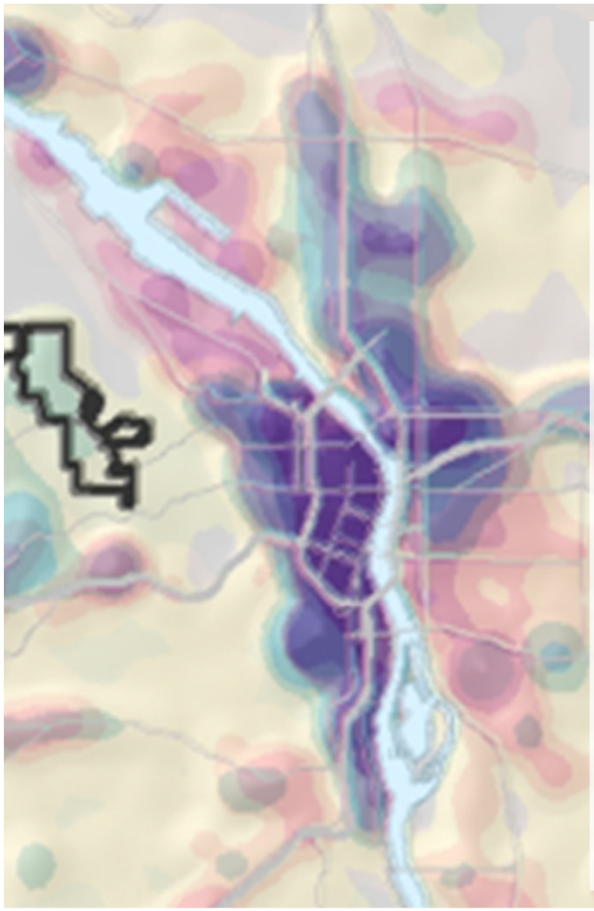
Closer Looks: Early Analysis with ETC Toolbox



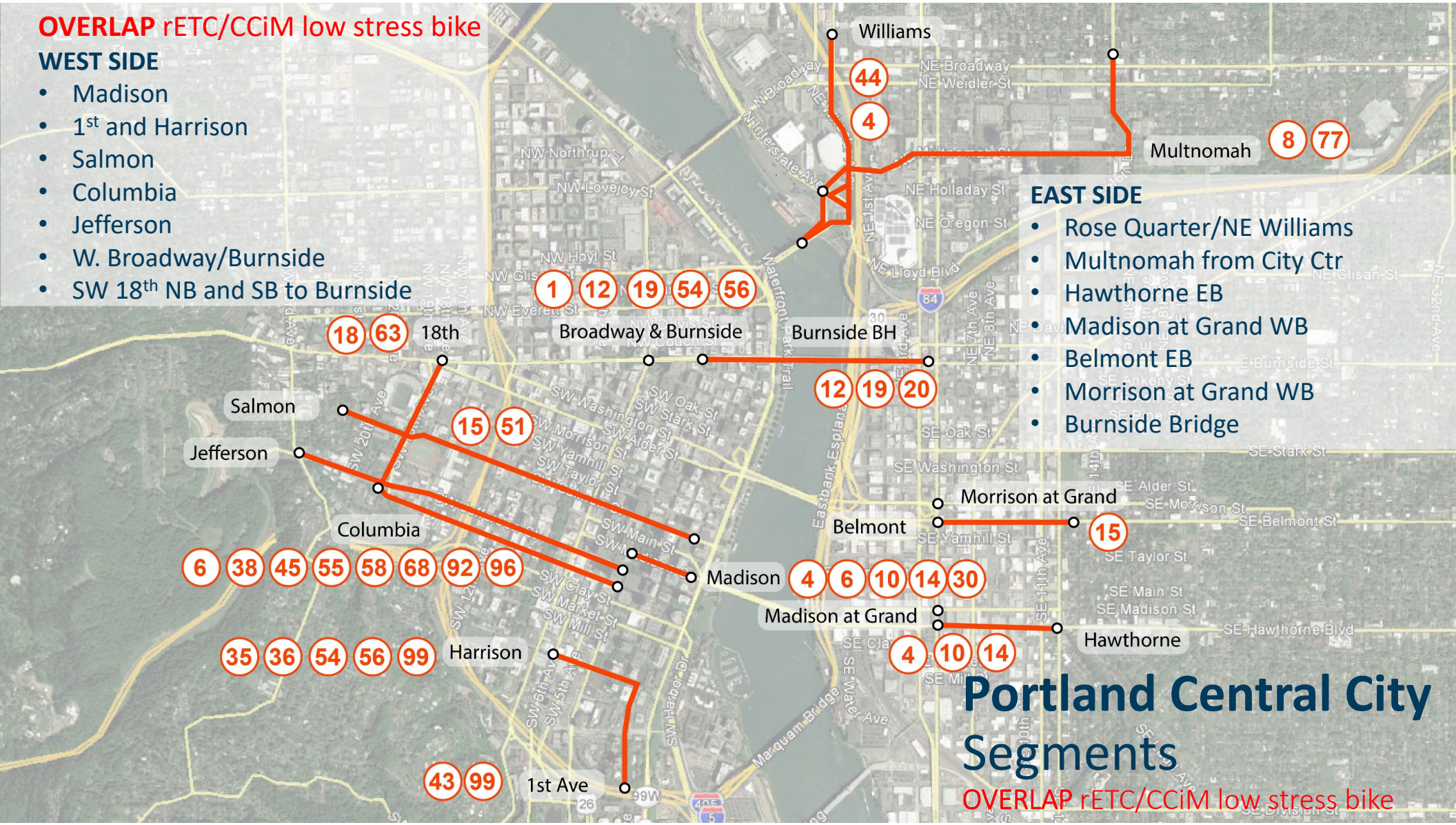
Closer look with ETC Consultant Team (3 corridors)

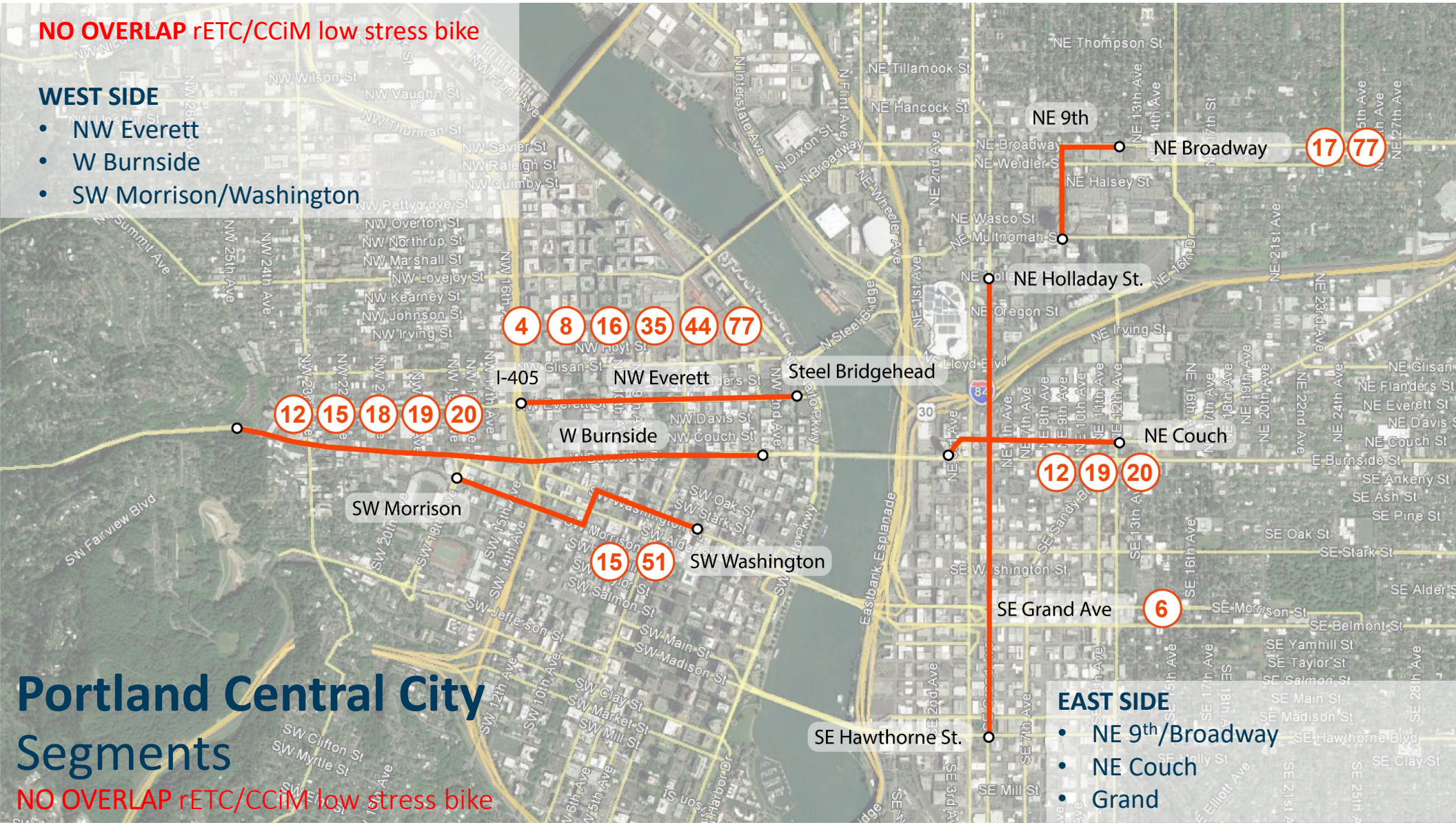
Closer look through other upcoming plans/projects

Central City in Motion



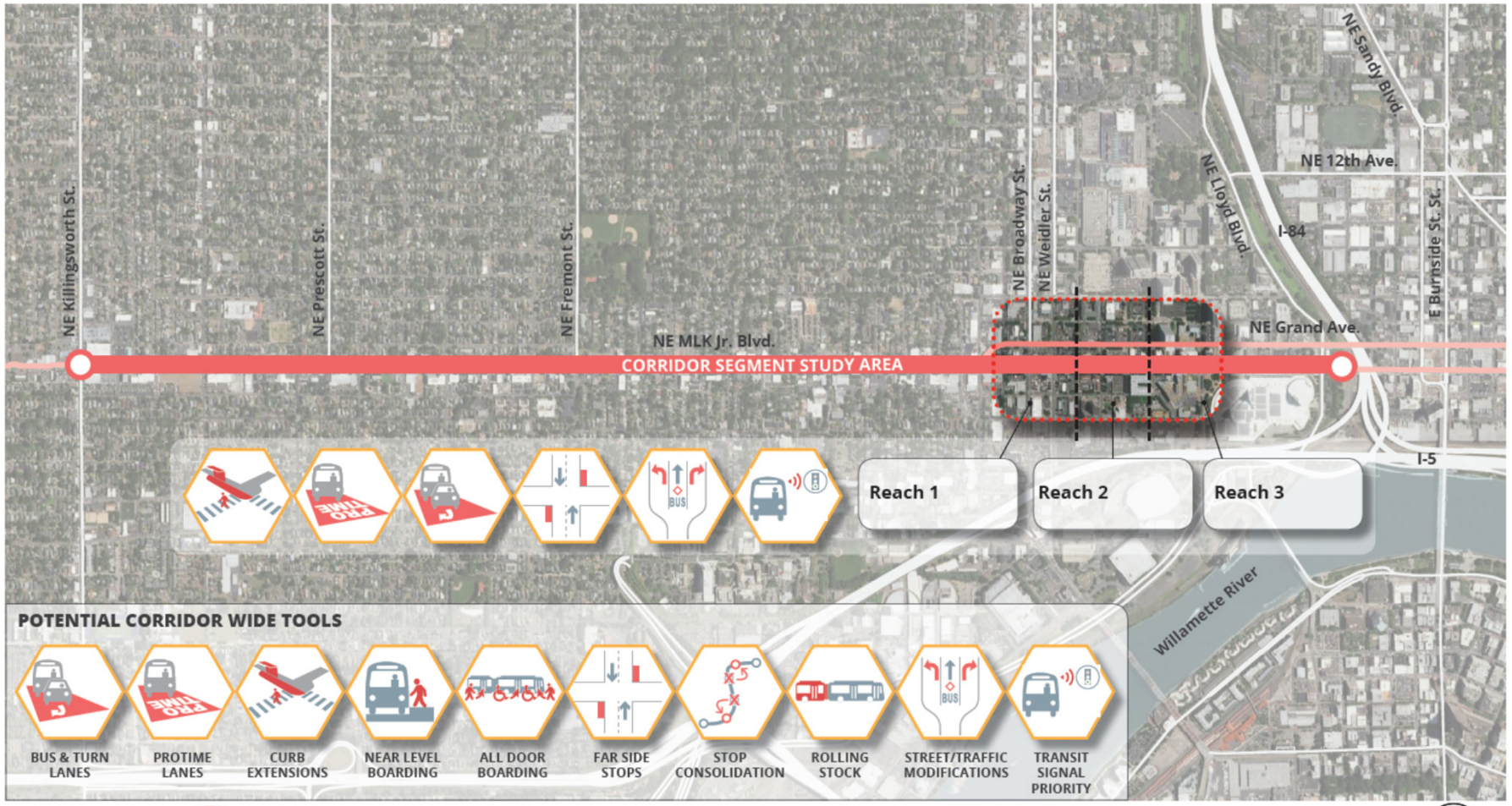
- **Increase Safety:** 20 of the top 40 high crash intersections for walking and biking are within the project area
- **Accommodate Growth:** By 2035, the Central City is expected to have 37,000 new household & 51,000 new jobs
- **Prioritize Transit:** Provide time savings for commuters using TriMet in peak hours
- **Define clear bicycle network:** the Central City lacks clearly defined routes for people of all ages and abilities to bike on
- **Clarify PBOT's strategy:** Stakeholders and the public expressed concern that PBOT wasn't looking at the whole picture in making active transportation improvements in the Central City, particularly for the bike network.


OVERLAP rETC/CCiM low stress bike
WEST SIDE
• Madison
• 1st and Harrison
• Salmon
• Columbia
• Jefferson
• W. Broadway/Burnside
• SW 18th NB and SB to Burnside
EAST SIDE
• Rose Quarter/NE Williams
• Multnomah from City Ctr
• Hawthorne EB
• Madison at Grand WB
• Belmont EB
• Morrison at Grand WB
• Burnside Bridge
Williams
44
4
Multnomah
8
77
1
12
19
54
56
Broadway & Burnside
Burnside BH
12
19
20
18
63
18th
Salmon
15
51
Jefferson
Columbia
6
38
45
55
58
68
92
96
Madison
4
6
10
14
30
Morrison at Grand
15
Belmont
Madison at Grand
4
10
14
Hawthorne
35
36
54
56
99
Harrison
43
99
1st Ave
Portland Central City
Segments
OVERLAP rETC/CCiM low stress bike


NO OVERLAP rETC/CCiM low stress bike
WEST SIDE
• NW Everett
• W Burnside
• SW Morrison/Washington
4 8 16 35 44 77
I-405
NW Everett
Steel Bridgehead
12 15 18 19 20
W Burnside
SW Morrison
15 51
SW Washington
NE 9th
NE Broadway
17 77
NE Holladay St.
NE Couch
12 19 20
SE Grand Ave
6
SE Hawthorne St.
EAST SIDE
• NE 9th/Broadway
• NE Couch
• Grand
Portland Central City
Segments
NO OVERLAP rETC/CCiM low stress bike

Three ETC segment Closer Look Outcomes

- Identified some potential ETC tools in spot locations.
- Identified general considerations and potential impacts to traffic access, circulation, diversion, on-street parking, multi-modal environment, private property, etc.
- No formal project recommendations at this time.
- Additional project development and analysis is needed to understand the full potential benefits and trade-offs.
- The Regional ETC Pilot Project could provide such opportunity.



LINE 6 NE MARTIN LUTHER KING, JR. BOULEVARD CORRIDOR STUDY AREA

Overview Map of Potential ETC Tools

Enhanced Transit Corridors Plan
January 2018 **DRAFT**

NTS

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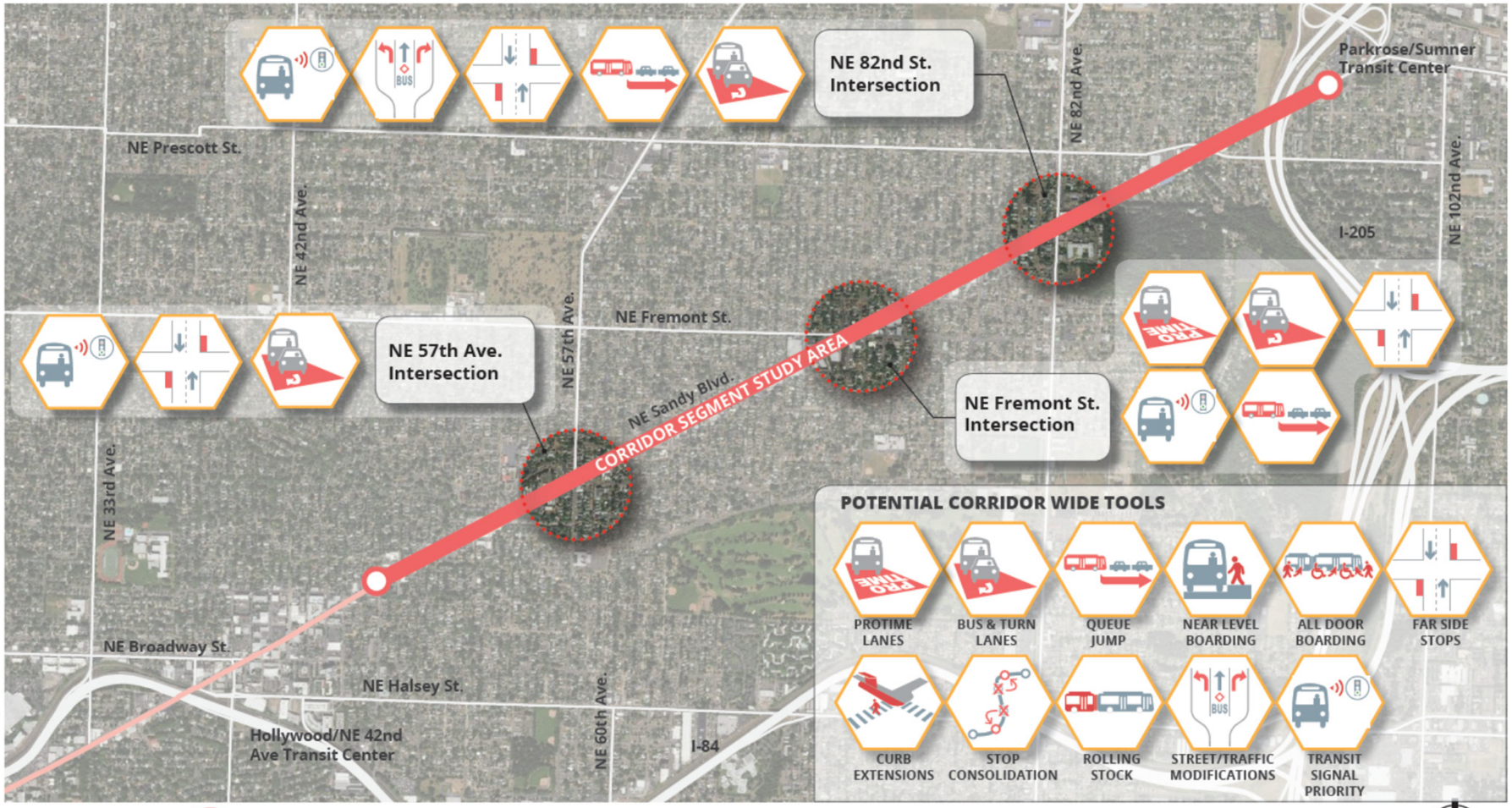
*This design is preliminary, future study is required.



LINE 12 NE SANDY BOULEVARD CORRIDOR STUDY AREA

Overview Map of Potential ETC Tools

Enhanced Transit Corridors Plan
January 2018 **DRAFT**

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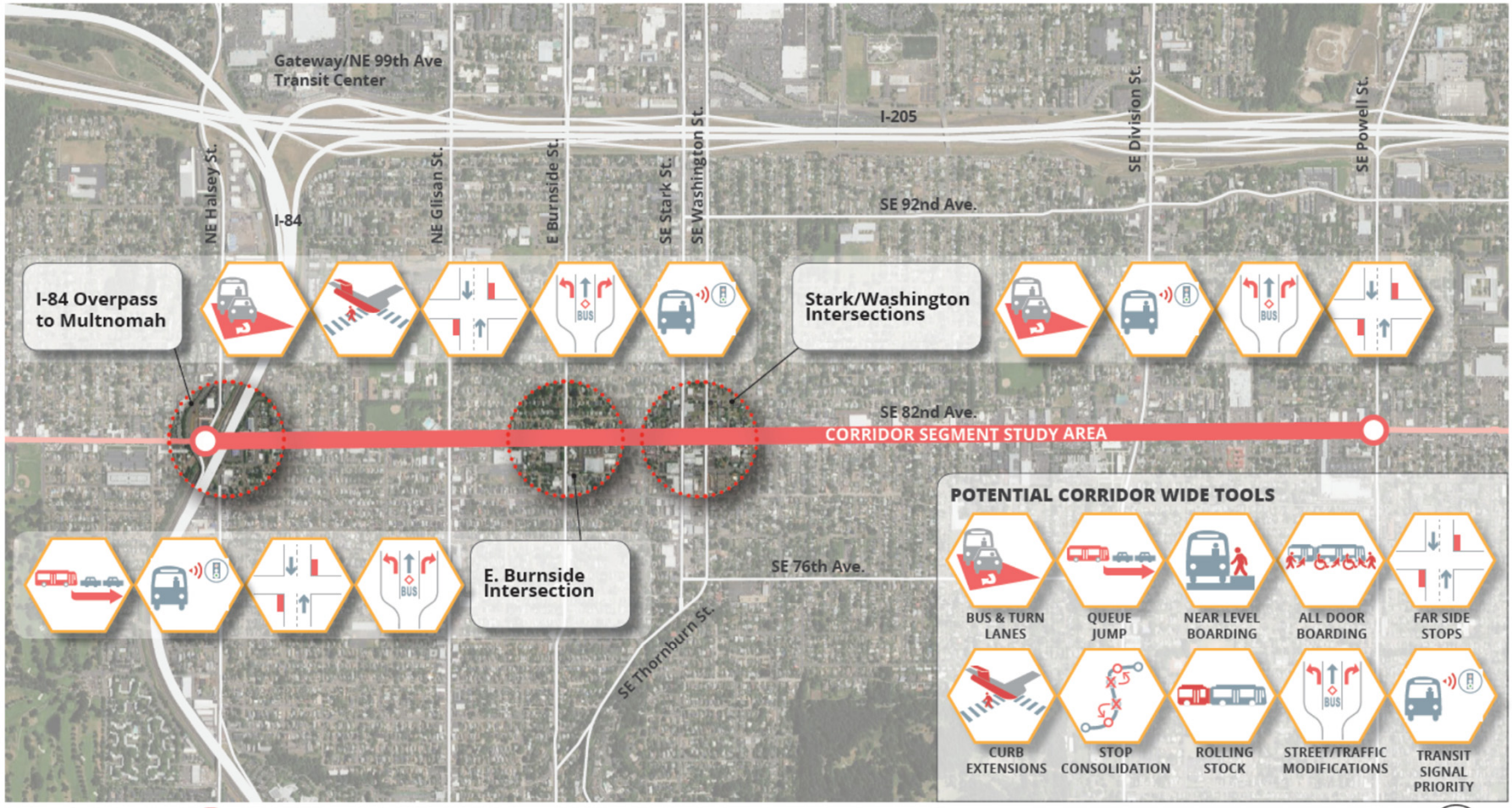

LINE 72 82ND AVENUE CORRIDOR STUDY AREA

Overview Map of Potential ETC Tools

Enhanced Transit Corridors Plan
January 2018 **DRAFT**

NTS

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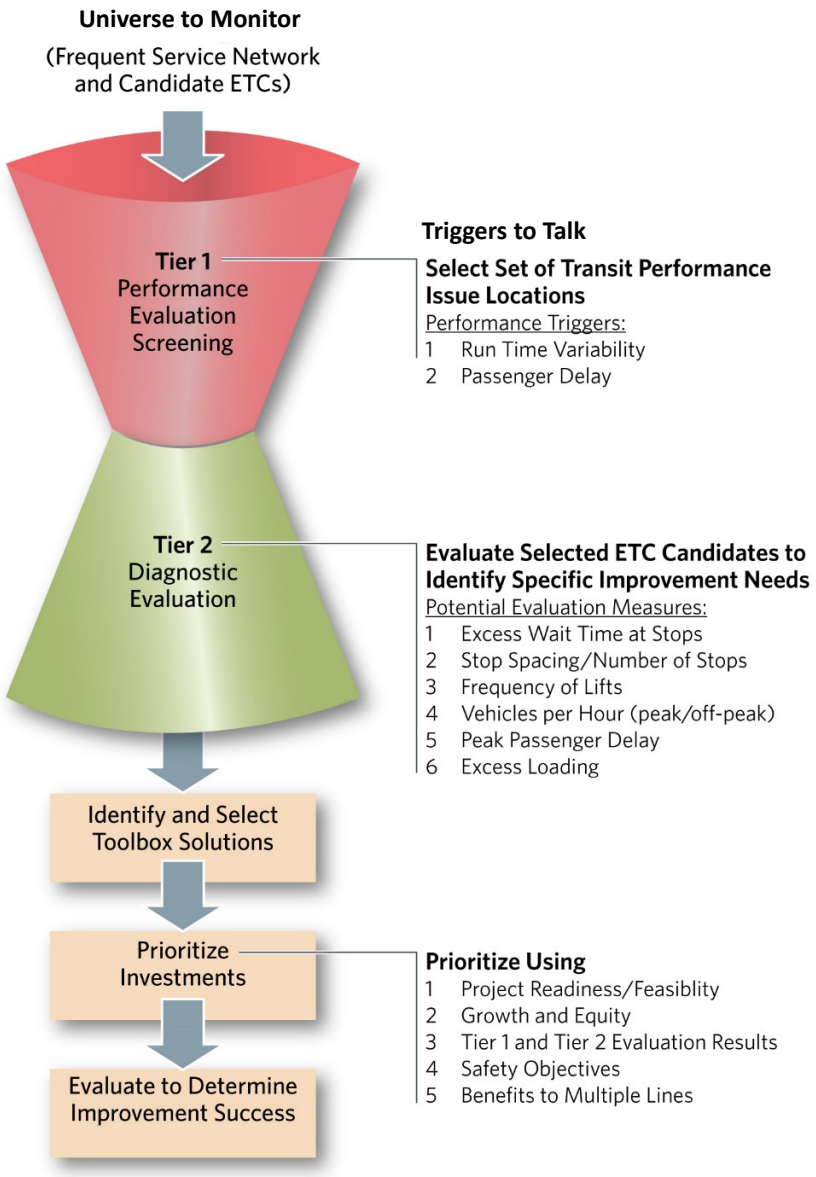
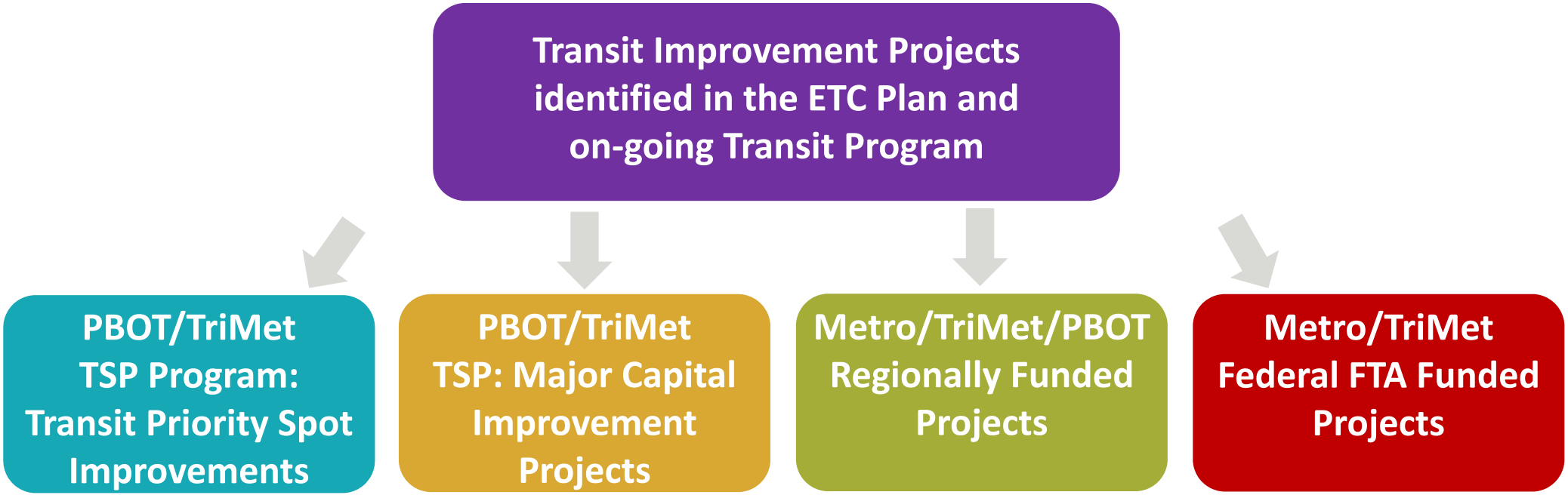
*This design is preliminary, future study is required.

Framework for Transit Program & On-going Performance Assessment



- Step 1: Identify the network universe
- Step 2: Monitor Triggers to Talk
- Step 3: Diagnose the kind of delay
- Step 4: Apply ETC Toolbox
- Step 5: Prioritize Investments and Implement
- Step 6: Evaluate for success and on-going need
- Repeat

Tracks for Project Implementation



Key Outcomes of the Workshops

- Identify potential conceptual improvements in these corridors for future study and project development.
- Identify potential benefits, constraints, impacts, trade-offs and considerations.
- Determine which segments to advance to 15% design and to potentially include in project list for the Metro RTP 2018 Update
- Determine which potential ETC projects to place in an ETC project pipeline for additional study and refinement

TSP Policy 9.6 – Regarding the transportation strategy for people movement

Implement a prioritization of modes for people movement by making transportation system decisions according to the following ordered list:

1. Walking
2. Bicycling
3. Transit
4. Taxi / commercial transit / shared vehicles
5. Zero emission vehicles
6. Other single-occupant vehicles

When implementing this prioritization, ensure that:

- The needs and safety of each group of users are considered, and changes do not make existing conditions worse for the most vulnerable users higher on the ordered list.
- All users' needs are balanced with the intent of optimizing the right of way for multiple modes on the same street.
- When necessary to ensure safety, accommodate some users on parallel streets as part of a multi-street corridor.
- Land use and system plans, network functionality for all modes, other street functions, and complete street policies, are maintained.
- Policy-based rationale is provided if modes lower in the ordered list are prioritized.